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Original Communications.

ARTICLE I.

A CASE OF FACIAL ERYSIPELAS IN A LYING-IN PATIENT WITHOUT PUERPERAL FEVER. By NORMAN BRIDGE, M.D., Chicago.

The report of a case of "erysipelas in child-bed without puerperal peritonitis," at the recent meeting of the American Gynæcological Society, by Dr. Campbell, of Georgia, has led me to recall a similar case in my own practice, and to examine the notes taken at that time.

The patient was a woman of about forty years of age, who had been something of an invalid for several years; who was exceedingly nervous, irritable, dyspeptic and despondent. For weeks previous to confinement she suffered with various neuralgic pains, vomited most of the little food she ate, and thoroughly believed she would die in her confinement. Her last previous confinement, eight years before, had been a severe one; had resulted in an extensive laceration of the perineum, for the relief of which Prof. Peaslee had, a year before, made a successful operation.

Her confinement occurred in the night, was very rapid, and delivery was accomplished about half an hour before my arrival. I found the child dead, but it was said to have been alive at birth, and to have cried. It had not been removed from the mother. I delivered the placenta, and soon afterward left the patient in a comfortable condition.

At my call the next day, at eleven o'clock, the patient complained of a burning sensation on her nose; a small spot of erysipelas was noticeable on that part of the nose where facial erysipelas so often begins, and her pulse was found to be 84, and her temperature 102° F. She complained of headache.

The erysipelatous surface was painted with flexible collodion; hot, carbolized, vaginal injections were ordered, and sulphate of cinchonidia to be taken—two grains every two hours. At five P. M. the only changes noted were a rise of half a degree in the temperature, and a rapid spreading of the erysipelas. At one P. M. the next day the disease had covered both cheeks and under eyelids, upper lip, and the entire surface of the nose. The pharynx was inflamed, and the patient complained of soreness in swallowing. No change in temperature; pulse 80.

The next day (the third after confinement) the forehead, part of the scalp and ears had become involved in the inflammation. The tincture of iron was now ordered in small doses, but soon had to be abandoned, on account of the gastric irritability. Pulse 84; temperature $102\frac{1}{4}$.

On the following day at five P. M. the pulse was 90, and full, the temperature was $102\ 3\text{--}5^{\circ}$ F., and there was now discovered, for the first time, slight tenderness over the region of the uterus. No tympanitis was present. The lochia, which till now had been free from bad odor, were slightly fetid. This symptom had disappeared by the next day, and the abdominal tenderness was nearly gone. The temperature had fallen to $102\ 1\text{--}5$, and the pulse to 80. The erysipelas had ceased to spread, and was fading away upon the central portions of the face. Recovery now was rapid. There were no other unfavorable symptoms; the erysipelas recovered in the usual time and manner, and there was free exfoliation of the cuticle.

In ten days after the confinement the patient was ready to

begin to assume the sitting posture, as though no complication had occurred. The cinchonidia sulphate was taken quite regularly during the sickness, the vaginal douches were not omitted, and the face was daily painted with the flexible collodion.

There was no delirium at any time.

81 Throop St., Dec., 1881.

ARTICLE II.

A FURTHER VINDICATION OF LALLEMAND. By GEO. H. PICARD, A.M., M.D., Topeka, Kansas.

Since the publication in the September number of THE JOURNAL AND EXAMINER of my paper, entitled "The Pathology of Involuntary Spermatic Fluxes," I have obtained a startling corroborative experience of the correctness of M. Lallemand's views on *diurnal seminal emissions*. It is the fashion among modern neurologists—who have developed a tendency to specialize spermatorrhœa—either to ignore the manifestation of diurnal seminal losses occurring after defecation and micturition, or to ascribe their appearance to general plethora. According to Prof. Bartholow, they do not pathologically exist, and their presence is to be regarded as a physiological overflow. Prof. Austin Flint, Jr., less positively asserts that their reality is doubtful; and Prof. M. Rosenthal, even less radical, declines to discuss them.

These modern views of the neuro-spermatists—as I have already termed them—are not only an aggressive encroachment upon the rational theory of M. Lallemand and the Montpellier school, but are directly opposed to the well established theory and practice of the flower of British and Continental surgery. M. Lallemand, who instituted a series of cadaveric and clinical experimentation extending over a longer period and embracing a greater variety of cases than any subsequent observer, taught that diurnal involuntary spermatic fluxes were not uncommon sequences of prostatic irritation. Exactly how numerous these cases are, I am not prepared to affirm; suffice it to say, that within the last five years I have found a dozen of them, and I am satisfied that every one

of them depended upon a structural modification of the prostatic urethra. That my cases were genuine spermatorrhœa of this variety, and that the lesions were purely local, and not prodromes or sequences of any ataxic condition, I desire to illustrate by giving the history of two of the more recent of them:

I. An Englishman, aged thirty-three; light complexion; pronouncedly lymphatic temperament; weight 220 lbs.; six years married; wife healthy; no children; temperate, highly intelligent; general health perfect; *a suo confessione* a devoted masturbator from early youth until his marriage; remembers to have had only two nocturnal emissions with an erection during his life; first noticed a passive discharge after defecation about two years before his marriage; consulted an eminent neurologist, who, without a microscopical examination, pronounced it a case of "prostatic sexual inquietude" of no importance, and declined to treat it. It is but just to add, that the existence of the habit was not revealed on that occasion. Had never essayed sexual intercourse previous to marriage; was unsuccessful in his first attempts at coition, and supposed himself impotent; after repeated trials, he succeeded in establishing intercourse, which he pursued with the assiduity he had given his old habit. The fluxes after defecation did not disappear, always returning on the third continent day; in his own words, "leaving me the choice between coition and emission." Becoming somewhat more abstinent after three years, the frequency of the discharges began to diminish, so that for the past year he has been able to remain continent for eight days, at the expiration of which they invariably return. The flow is perfectly passive and without sensation; his virile force seems undiminished, although his sexual apparatus shows signs of weakness, the penis being flabby, the testes somewhat too soft and shrunken, etc. He does not complain of any abatement of his sexual capacity.

My first impression, upon hearing this history, was a decided skepticism as to the seminal character of the discharge, and my unbelief was strengthened by the robust and cleanly appearance of the patient. After having several times microscopically examined the secretion, I became convinced of the truth of the story, having at each time found a genuine article of seminal

fluid, containing an abundance of spermatozoa in full activity. After a most minute and diligent questioning, aided by the intelligent willingness of my patient, I learned that the fluxes were entirely passive, unaccompanied by the slightest sensation, and occurring at precisely the moment he arose from stool. He further stated that the flow was followed by no such feelings as are the sequences of coition—slight mental confusion, muscular relaxation, etc. Living for a considerable period *absque marito* made no perceptible improvement in matters. There was no existing constipation; no evidence of any former urethral lesion; no suspicion of stricture or blennorrhœa. I could not believe that the disorder was prodromatic of any ataxic trouble, both on account of its long continuance and the absence of anything like nervous debility in my patient. General plethora, as a causative factor, was excluded, from the fact that there was no continence. A somewhat curious feature of the case—and I believe I have noticed the same thing in all my cases—was the exact periodicity exhibited by the discharges, at first recurring after an interval of three continent days, the interval being lately increased to eight days. Concluding that the affection depended upon a chronic prostatic congestion, I injected, by means of the long-nozzled syringe, 3j of the tanno-glycerine, 3-5, and enjoined perfect abstinence. After two weeks the flux returned. I then injected 3j of the strength of 3ij-5j; there was considerable discomfort and bloody urine for a day or two, but the flow has not returned, a period of nearly two months having already elapsed.

I hope that no one will consider that in this case I have mistaken prostatorrhœa for seminal loss. Although there was co-existent prostatic hyper-secretion, the microscope made the situation very clear.

II. This case is very similar in its general features to the preceding one, the chief points of difference being the less robust appearance of the patient, his having had gonorrhœa and balanitis before his marriage, and his less complete history of masturbation. Like number one, he complained of no loss of sexual power, no nocturnal emissions and no beginning of nervous disorder. Having been subject for several years to passive seminal losses after defecation, and although eight years married, still

childless, he consulted me as to the probability of the seminal drain having affected his procreative power. The fluxes took place after a continence of four days. Believing a chronic prostatic hyperplasia to be the causative influence, I adopted a plan of treatment which I have since several times employed with the most satisfactory results, *the hot water irrigation of the urethra*. For this purpose I use a small-sized catheter having numerous lateral perforations and a bulbous tip, which will almost completely occlude the entrance to the bladder. To the catheter I attach a rubber tube, which is connected with an elevated vessel containing the water; the force of gravity does the rest, the water returning through the abundant space left in the urethra by the small catheter. I begin with the water at a temperature of 90° F., which I gradually increase to 115° or even 120° F. A daily sitting of ten or fifteen minutes will be found amply sufficient. Time and perseverance are necessary adjuncts to this treatment. I have found hot water to be decidedly more efficient in the treatment of chronic urethral congestion than the frigid hydro-therapeutics so highly recommended by the neurologists.

I am more than ever convinced of the truth of Lallemand's theory of *structural change*. I am delighted to see that the younger Gross, in his recent admirable work, has seen fit to check the engrossing ambition of the neurologists. The neuro-spermatists have furnished us a theory which is not justified by their practice, since they are compelled to rely altogether upon local measures. M. Trousseau adopted the rectum-pessary of a charlatan, and one of the most brilliant of living neurologists writes me "that for genuine passive spermatorrhœa, I know of nothing at all to be compared to the *porte caustique* of Lallemand."

I wish that morbid anatomists might continue the search for evidence of structural lesions in the urethræ of subjects known to have had spermatorrhœa; I cannot think they would be disappointed.

ARTICLE III.

COCCOBACTERIA IN PURULENT OTORRHŒA .A Paper read before the Elkhart County Medical Association, at their October Meeting, by C. A. LAMBERT, M.D., of Goshen, Ind.

MR. PRESIDENT AND GENTLEMEN OF THE SOCIETY:—I would like to call your attention to a subject of vital importance in the treatment of purulent otorrhœa, and point out what, in my estimation, is and has been the cause of so many failures in arresting the breaking down and loss of the delicate organisms of the ears affected with this oppressive and destructive disease.

The chief cause of this putrid decomposition has been generally overlooked. I allude to the microscopic coccobacteria present in the pus, and the therapeutical indications furnished by their presence.

I design, with your permission, at our next meeting in December, to present slips for microscopic exhibition, and continue my remarks on this same subject.

Coccobacteria septica belongs properly to the domain of general bacterio-pathology, and I need not speak of this in particular, but call your attention to the recent investigations by eminent scientists and patient investigators, who have perfectly demonstrated the presence of these microphytes in the fetid ear discharge, and given us the cue for more rational therapeutics in these cases. It, I hope, will be granted me to quote a few lines from Billroth and Löwenberg, as the very latest we have on this subject.

“Löwenberg has, since June, 1880, carefully subjected to examination the products of secretion of the affected ears of all the patients coming under his care, in order to enable him to study the nature of the respective microphytes. The examination consisted, on the one hand, in the microscopic study of the pus (with all its accompanying detritus), obtained by syringing or otherwise; on the other hand, in attempts at cultivation, partly in the above mentioned media, and partly in boiled neutralized urine.”

The experiments were conducted with all the precautions necessary and indispensable in such cases. The experiments demonstrated that in all these cases we had to deal with the ordinary organisms of decomposition.

"In all cases of otorrhœa where the cleansing is not done with the greatest care, and by the aid of suitable apparatus, the pus contains great numbers of micrococci. If, in consequence of persistent neglect, the secretion is allowed to become offensive, the micro-organisms swarm in incredible quantities."

"In this connection, we can state with decided emphasis that, contrary to the belief in competent circles, the pus secreted in simple purulent otorrhœa, in its fresh state, is as little offensive as that from other diseased mucous membranes, simply on account of the absence of any cause therefor. Fetor, then, according to their present opinion, points to stagnation and a high degree of decomposition dependent thereon, the existence of which is proved by the presence of micrococci.

"The most abundant secretion or multiplication of micrococci is found in those cases that have been treated with emollients, particularly with cataplasms. These coccobacteria find all the aliments necessary to their growth and multiplication in the fetid ear discharges. If cataplasms increase the moisture and heat, and contribute additional organic material, we have an actual hot-house culture of bacteria.

"This condition explains the fact, well known to otologists, that, after the prolonged employment of cataplasms, almost interminable purulent processes in the ear often remain behind. Under this unintentional artificial cultivation, the putrefactive organisms reach a high degree of development, and in their turn keep up the prolonged suppuration. By a similar development and furtherance of micrococci, though of a special character, we may interpret the fact, that after continued application of poultices, outbreaks of furuncles may be incited in any part of the body."

Recognizing the presence of coccobacteria in nearly all these cases, and being satisfied of their presence, I will offer some observations from recent practice, and suggest a course of treatment that has been very satisfactory in my hands. All of us are

aware of the difficulty of treating properly these cases of perforation of the tympanum and chronic purulent catarrh of the middle ear, and I will reiterate by saying that the proper instruments are necessary: speculum, mirror, probes, syringes and absorbent cotton, etc., etc., and antiseptic remedies. The ear should be inspected every day, and carefully cleansed. I rely upon the syringe and absorbent cotton, and the appearance from day to day of the diseased parts is to dictate all the changes, if any, in the local treatment necessary.

I claim that no physician can treat successfully these cases as out-door cases. They must be surrounded with all care and circumspection; diet nutritious, and put, if necessary, upon alteratives and tonics, and cease entirely being exposed to the causes that originally produced the diseased condition; then we have a fair chance at the case. It may be a few days, or a few weeks, before we can get all the accumulations removed, so that when a remedy in liquid state is put into the meatus it can readily be forced through the middle ear and Eustachian tube. This is a *sine quâ non* in the successful management of even the simplest case. The time need not exceed, upon an average, more than from two to four weeks, even in the worst cases presenting. I cleanse the ear with a weak solution of carbolic acid, then gently mop out all the pus and detritus, and then resort to the Eustachian catheter, and find that the battle is fairly won when air can be made to pass through all the channels; then, and only then, are medications indicated. As to the particular ingredients of said washes, they are many; some say this is best, some that. I avoid nitrate of silver and sul. cupri almost entirely, and depend upon mild astringent solutions of sul. zinc, sul. morphia, alumen, and a trace of carbolic acid; fill the meatus full of this solution, and force it down through middle ear and Eustachian tube. I find that where the ear-drum is intact, and there is as yet no development behind it, acute otalgia can generally be relieved by very warm water, or warm solution of atropia sul., and that a timely operation for paracentesis of drum, when pus has accumulated, will hasten a cure and save the patient untold pain and suffering.

So the points I would make are—to use mild astringent reme-

dies, combined with antiseptics, such as carbolic acid, boracic acid, etc., etc., thorough inspection of the parts, careful cleansing, and a special local treatment that has for its main object the destruction of these coccobacteria. One reason, in my mind, that bacteria are found in so many of these cases, is the fact that most cases applying are chronic ones, and have been accustomed for days at a time to plugging the meatus in order to get relief from the feter, and protect their clothing.

In my next paper, I will call attention to the different bacteria, the micrococci zoöglœa, rod bacteria, spherical spirilli, and bacteria capitatum.

ARTICLE IV.

DOUBLE UTERUS (UTERUS BILOCULARIS), ATRESIA OF THE LEFT SIDE AND GONORRHOEAL AFFECTION OF THE RIGHT.
By O. STROINSKI, M.D.

Mrs. Bertha K., a German woman, thirty-two years of age, had been married two years to a healthy man, who acquired a gonorrhœal affection one year after the marriage. She was repeatedly infected, and after three months symptoms of a severe chronic parametritis appeared. She told me that she had menstruated the first time when fifteen years of age, and without any pains or other trouble. But at the time of the next menses she began to suffer from severe pains in the suprapubic and iliac regions, and there was no flow of blood. The pains increased to a considerable degree, a high fever set in, and the physician who was treating her at this time considered her state as very dangerous, calling the disease a peritonitis. Notwithstanding several repetitions of the same symptoms, the girl recovered, and began to menstruate regularly three months after her recovery; in all, six months after the first menstruation. The menses kept on regularly for the next five years, when the same symptoms reappeared. At this time she was examined by a physician, who called the disease a "retarded menstruation," and also thought her condition very dangerous. She refused an operation then proposed.

The next eight years passed without any further accident, the menses being very regular; but after this time the sickness re-appeared twice in one year—the symptoms not being so severe as formerly.

After being infected for three months (*i. e.*, nine months before I saw her) a relapse of the same disease took place, and continued for two months. In examining her, she appeared a strong and well nourished, but pale and anæmic looking woman. The external genital organs were found to be in a normal condition, and also the vagina—the latter being only somewhat shorter than usual. In entering the vagina with the index finger, a normal cervix, with a virginal *os externum*, could be felt, drawn a little to the right side; but in pushing the finger upward to the fornix vaginae, there was found, on the left side of the cervix, a rounded body resembling exactly another but smaller cervix, but without an opening (*os*). Between the normal cervix and this appendix there could be distinguished a line of demarcation which continued through the whole uterus up to the fundus. In bimanual palpation the same line could be felt through the abdominal walls, and on the upper part of the fundus there was an inlet into the same, dividing the uterus in two parts. The right side was normally constructed, respecting the metritical and parametritical condition of the same, representing a normal sized pear-shaped body; but the left side was twice the size of a normal uterus, and of a rounded globular-like shape, springing like the bulk of a new growth from the former. Through the vagina and the rectum the finger found the elongation of the normal cervix as a body like that of a normal uterus, but on the left side there was a thickening of the walls and an enlargement of the uterus, beginning right behind the cervix.

By manual pressure, the walls of this side of the uterus could be compressed like a bag filled with water, but the woman fainted by this manipulation. The speculum showed the endometrium in a state of inflammation, and the *os* discharging a greenish-white fluid (gonorrhœal). The parametrium was very painful by touching it, and I did not introduce the sound on account of this condition. There was in this case, doubtless, a complication of three different diseases which I had to consider: *i. e.*, first, a

recent gonorrhoeal infection; second, a chronic parametritis; third, an occluded uterus filled with a fluid. After three months' treatment the gonorrhoea was banished entirely and the parametritis—the latter being treated by energetic painting of the posterior vaginal wall. The parts were in such a condition that I thought it advisable to open the occluded uterus. I introduced a trocar of the smallest size through the occluding membrane—which, by the way, was half an inch thick, and a dark-colored fluid, of a smell like thickened ox-gall, began to dribble away from the new os externum. I did not enlarge the small opening, but kept it in the same condition for two weeks, introducing a small bougie once or twice a day, and preventing an infection of the vagina by washing out the same three times a day with a solution of chloride of zinc. The reason for being so slow in emptying the uterus was, first, the enlarged condition of the Fallopian tube, palpable through the abdominal walls; second, the irritated state of the peritoneum, which had been inflamed so often, and which was always sensitive to the touch. In six weeks' time the uterus contracted to about the normal size, and I washed out the cavity with a strong solution of carbolic acid, the opening of the Fallopian tubes being also contracted. The sound now entered both sides of the uterus, a thick layer of (fibrous) tissue dividing the latter, and each side having the same function as the other, *i. e.*, separating the menstrual flow alternately.

The question, how was the menstrual blood in the uterus absorbed in the former menstruations?—for this must have been the case—seems to me pointed out by the irritative condition of the peritoneum covering the uterus, and I am convinced that the blood accumulated in the uterus was transuded through the walls and absorbed by the peritoneum, the process being very slow, and having been performed at several irregular intervals.

ARTICLE V.

DIPHTHERIA AND TREATMENT. By Z. T. MAGILL, M.D., Lincoln, Mo.

There has been much written and said about the above subject, yet the formidable ravages of the disease are still sweeping over our

land at a frightful velocity. We go to the bedside of the little sufferer and follow carefully the treatment laid down in our best text books, yet how often, to our chagrin and dismay, the avenue of life is gradually clogged and the scene is ended. The question naturally arises, "Why do we allow so many children in the glow of beauty and health to succumb in from twenty-four to thirty hours from this fell destroyer." One reason is, the foe is upon its prey by the time we have resorted to our armamentarium: then a hand-to-hand battle ensues between life and death. We have no time to wait for the removal and prevention of ferment or spores in the fluids of the body by drugs *per orem*. In many cases, upon our first examination, the fauces, larynx and trachea are covered with a fibrinous exudation in the form of a false membrane. We must remove it (not by force), and prevent the re-formation. Many times it is beyond the reach of local applications with probang and gargles. Then the only direct resort is by inhalation. Relief is often given from slaking lime. Yet it has not been a success in my hands. Of late, carbolic acid is the sheet-anchor with me in the treatment. Having provided myself with an ordinary hose, from three to five feet long, and perhaps an inch in diameter, I place one end over the spout of a common tea-kettle, in which I place half a gallon of water and half an ounce of carbolic acid; then set the tea-kettle on the stove over a good fire, and when the water is at boiling point carry the other end of the hose under a blanket thrown over the patient's head and steam. The room should be closed. In a short time the patient will perspire freely, the sweat glands acting as a powerful emunctory and thereby eliminating the virus of the disease from the blood. If persevered in at short intervals, breathing becomes softer, and presently, after a succession of quick expulsive efforts, the patient throws off a coat or tube of false membrane. The acid vapor seems to prevent the re-formation of exudation. Whether it is owing to its local influence altogether on the mucous membrane, or to its action on the blood circulating through the lungs and the elimination of the virus by the functions of skin, I am not able to determine; probably by the combined influence. As the danger in many cases is chiefly from asthenia, I give alcoholic stimulants just short of alcoholism, and sulph. quinine in liberal doses; also good, nutritious diet.


Clinical Reports.

ARTICLE VI.

A CASE OF MALARIAL KERATITIS. By E. J. GARDINER, M.D.
Assistant Surgeon to the Illinois Charitable Eye and Ear
Infirmary.

In the December number of this journal, my friend, Dr. Hotz, published a paper in which this form of keratitis is so truly described that I consider it superfluous to enter into any general description of the disease in this report. My object in publishing this case is to contribute as much as possible to the knowledge of this form of eye disease, of which thus far so little has been written, and indeed of which, until quite recently, so little has been known. I consider the case a very interesting one, because the patient, having been under my care during the whole course of the trouble, I was enabled to watch the progress of the disease from the very first symptoms.

Mrs. S., age 42, of rather delicate constitution, had been under my care for about a fortnight for a bad case of Blepharitis Ciliaris Ulcerosa. I had succeeded in removing the scabs from her lids, and the ulcers which extended along the whole border of both her upper and lower lids, were very nearly cured. I missed her from my office for a couple of days, and when, on the third day, she returned, she informed me that, on the evening of the last day I had seen her, she was suddenly taken with a chill, which was followed by high fever. Having passed a very restless night, she remained in bed the next day. After I had treated her lids she asked me to examine her eye, because something had got into it on her way to my office. I examined the cornea very carefully, with focal illumination, but *nothing*

could be seen. A small foreign body was found in the cul-de-sac of the lower lid. The following day she appeared at my office with her eye bandaged, and stated that in the afternoon of the previous day she had been seized with a most violent pain in her right eye; the pain increased toward night, and had not ceased for a moment. When I opened the lids, I found considerable pericorneal injectoin, very intense photophobia, and very profuse lachrymation. On the upper and outer quadrant of the cornea I detected a little grayish vesicle, from which started a little line of grayish infiltration, which extended outward and a little upward, and ended at the periphery of the cornea. Thinking it to be a case of common phlyctenular keratitis, I prescribed a solution of atropine (gr. ij. to ℥ of water)—and dusted a little calomel into the eye. The patient returned the next day, stating that the medicine had given her no relief. The pain was even more severe. On examination I found that the pericorneal injection had increased, and the photophobia was so intense that moderate light could not be borne. With a good deal of trouble, and not a little persuasion, I at last succeeded in examining the eye with focal illumination. I was well repaid for my pains, for the following interesting condition was revealed: The vesicle and line of infiltration I had seen the previous day had disappeared, leaving in their place a linear abrasion and a little ulcer; from the latter started two little bands of infiltration, one of which travelled directly inward for about a millimeter and terminated in a little vesicle; the other, which also led to a little vesicle, travelled downward and inward, and was also about a millimeter long. The form of the whole thing resembled that of a , placed in the horizontal direction. Of course there was then no room for doubt. The case was one of malarial keratitis. I prescribed sulphate of quinine—the atropine to be continued. Two days later I saw Mrs. S. She stated that the pain had subsided after the second dose of quinine. The pericorneal injection had considerably decreased, and the eye bore light very well. With focal illumination I found that two little lines of infiltration had started from the two little vesicles (now changed into ulcers), but they appeared as if the process had been cut short by the treatment, because not only were they much shorter than the other lines, but they

did not terminate in vesicles as the former ones had done. The abrasion, which extended from the periphery of the cornea to the first ulcer, had filled up, leaving a line of opaque tissue in its place. The healing process continued steadily from this time on, travelling always from the periphery toward the centre. After two weeks nothing but a diffuse opacity was visible, and after two months this also had disappeared.

IODOFORM IN THE TREATMENT OF DISEASES OF THE SKIN.—

Mr. Frazer has obtained very favorable results from the use of iodoform in various diseases of the skin. It may be readily employed in the form of an ointment of any required strength, mixed either with lard or vaseline. The strength of the ointment made use of has ranged usually from ten to thirty grains of iodoform to the ounce of cerate, but double this quantity can be applied. It has proved a most useful remedy in healing local eczematous eruptions occurring in strumous children and young people, as well as in cases of impetigo. Mr. Frazer also directs attention to the properties it possesses in curing porrigo decalvans. The best results he has as yet attained have followed the application of vesicating collodion over the affected spot and for a short distance around it. Previous to this it is well to epilate all diseased hairs over the spot, and when the blister is healing the ointment of iodoform should be applied night and morning, or oftener; by this treatment the hair soon reappears in a healthy condition.—*British Medical Journal*.

Foreign Correspondence.

ARTICLE VII.

LONDON, Dec. 3, 1881.

EDITORS CHICAGO MEDICAL JOURNAL AND EXAMINER:—

Each of the fourteen general hospitals has of this city has its "out-patient" department; a dispensary in fact. The attendance is enormous, and divided into sections according to the nature of their ailments, these patients furnishing abundant facilities for medical instruction. Every department of therapeutics is represented at each hospital by a specialist, and here is laid the foundation for that broad knowledge of and practical acquaintance with the entire range of medicine and surgery which distinguishes the young English graduate. Every student serves as dresser or assistant in each of the various departments; with the surgeon he has opportunities for dressing, with the gynæcologist, for using the speculum, with the ophthalmic surgeon for employing the ophthalmoscope, and so on throughout the whole list. Certificates of such service are required before the student is admitted to the privileges of study in the wards. Here he becomes clinical clerk to a physician or dresser to a surgeon, and thus comes into intimate contact with the severe cases, medical and surgical.

In his four years of study, therefore, he has—he is *compelled* to have—vast opportunities, probably unequalled outside of English schools, for immediate and practical observation of disease. These advantages can be realized when one reads that the privileges of the London Hospital, containing 800 beds, where were treated, during 1879, 6,361 in-patients and 47,998 out-patients (excluding 22,737 cases of diarrhœa), are divided among about one hundred students. The student revels, in fact, in a luxury

of disease; but there is, unfortunately, one signal defect in the system, which vitiates the whole—the lack of instruction. I do not refer to didactic lectures, which in these days of good text-books can only exceptionally be regarded, except by a stretch of courtesy, as instruction; the London student is lectured enough, but he receives very little personal instruction in the examination of patients, in the use of the various means of diagnosis which the physician must employ. He may watch his teachers in their examinations; he is at liberty to examine patients himself; but he is not supervised, questioned, corrected, directed as he might and should be. Hence it is that at the end of his four years' work, after examining hundreds of cases, he is often unable to distinguish the crepitant râle of pneumonia from the sonorous râle of asthma; he regards as a granular cast a harmless collection of amorphous urates; he considers an opacity of the lens as a retinal hæmorrhage. These are not fancy pictures, but instances of mistakes "taken from life." Yet so far as he can learn by observation and practice, without individual teaching, the London student is a model, and he is probably, on the whole, the best-informed man, for his years, in practical medicine and surgery, that I have as yet observed.

After securing his license to practice, or becoming "qualified," in local parlance, from the College of Physicians, or from that of Surgeons, or from any other of the nineteen corporations empowered to confer degrees in Great Britain, several professional paths are open to the youthful Esculapian, whose destructive tendencies are indicated not by a simple "M.D.," as is the case in every other civilized country, but by M.R.C.S., or L.R.C.P., or some equally imposing literary array. (I have counted no less than fifteen such capitals in procession after one name). He may become a general practitioner, or a consulting physician or surgeon. In the former case he displays, not simply a "shingle," but also a very suggestive, sanguinary looking red glass case, enclosing a gas jet, whose lurid glare notifies the world that a "Surgeon, etc." is domiciled there. I was at first curious to know the significance of that "etc.," until I one day noticed that one man unblushingly labeled himself "Surgeon and Accoucheur." It then dawned upon me that the "etc." was a

euphemism, employed out of deference to the well-known delicacy (sic) of the British public. This "surgeon, etc." treats everything that falls into his net, receiving fees as low as a shilling, dispenses his own medicine, and sends for a "consultant" in any doubtful case. If he be very successful, he may in the course of time abandon general practice and become a consulting physician—the exception, however.

The true "consultant" has never sullied his reputation with general practice. After receiving his degree he becomes house-surgeon or physician somewhere; subsequently, if very "swell," he spends a few months "abroad, you know, aw;" then he opens a "consulting-room," usually in the East End; his consultations during the first few years being chiefly with his laundress and boon companions. Meanwhile he secures one of the numerous subordinate posts at a hospital, with a small salary—eighty to one hundred pounds—attached—as assistant demonstrator of anatomy, or clinical assistant, or registrar. With this income and his private resources he maintains his consulting-room and a supply of silk hats—both absolutely essential to professional dignity—and spends his spare time in study at special hospitals, and in reading for his fellowship examination. After a longer or shorter period he gets an appointment as assistant physician or surgeon, picks up two or three other appointments at various hospitals, and if he can subsist five or ten years longer, begins to get some private (consultation) practice. In another ten years he moves to the West End, procures a carriage and pair, with liveried coachman, and is a great man. I am acquainted with a gentleman who is assistant surgeon to a large general hospital, surgeon to an eye hospital, a skin hospital and a children's hospital; he has an elegant suite of rooms, and hopes some day to have a practice. In this way the Jonathan Hutchinsons are made—by devoting the first few (sometimes many) years of professional life to hospital work exclusively, renouncing all pecuniary considerations for the sake of a vast clinical experience.

At the various special hospitals, sixty-six in number (returns of new hospitals for last week not yet received), one sees enormous numbers of patients—each physician usually seeing from 125 to 250 during the afternoon. These "hospitals" are in

fact but little more than dispensaries, since they have in many cases only ten to thirty beds each; the buildings are usually dwelling-houses, quite devoid of the necessary sanitary appointments. Many have originated in a "want long felt" by certain medical men, of opportunities for studying disease, opportunities which they were unable to obtain at regular hospitals. As a natural consequence, there has arisen a shameless abuse of "charity" by people abundantly able to pay for professional advice. In fact, the competition for patients is not limited to the small hospitals; a few days ago there appeared in one of the leading dailies a letter from a "grateful patient," extolling the care and skillful treatment which she had received at a certain large general hospital, and advising people who needed attendance to patronize that institution, "especially if they were able to pay eight shillings a day." A writer in a medical journal, commenting thereon, prophesies the appearance at no distant date of placards on the omnibuses and walls—"Try St. Thomas' Hospital; bones skillfully set; operation bloodless and painless; only eight shillings per day." "Go to Guy's Hospital for Mary Jane's champion poultices—two shillings," etc. There appear at intervals in the daily press articles from medical men urging the necessity for reforming and regulating the numerous medical charities of the city, but no one seems disposed to initiate the movement.

Medical practice in London presents few novel features, aside from its extreme conservatism. The surgeons use for fractures of the leg the wooden box with bran bags, and starch or gum bandages; for fractures of the thigh a weight and pulley and perineal band; they reduce downward dislocations of the shoulder by means of the heel in the axilla. They are adopting the Vienna treatment of ulcers, burns, fungous joint surfaces, etc., by iodoform in powder or solution. Mr. Lister and some others cover ulcers with iodoform, lay over this a piece of "protective," and cover this again with boracic lint—*i. e.*, lint which has been dipped in a saturated solution of boracic acid, crystals of which are deposited on the lint in drying. Another Vienna notion, Leiter's leaden tubes for conducting water of a constant temperature over an inflamed part, have also been introduced.

The physicians are remarkable, first, for their faith in reme-

dies, and second, for the minuteness of detail with which they examine patients. They are not content with the stethoscope, thermometer and test tube; they examine the eye, including the fundus; the mouth and larynx: palpate the abdomen; hammer out the knee-jerks and all the other jerks; estimate the quantity of urea; count the blood-corpuscles; note patient's weight; test his sensation, general and special; secure tracings with the sphygmograph and cardiograph—not, of course, in every case, but certainly upon slight provocation. Nor is that all. Dr. Sansom, instigated by a Frenchman during the late Congress, undertakes to mark out by percussion the walls of the various cavities and the position of the several valves in the heart. He employs a pleximeter of ebonite, a simple cylinder with the diameter of a thin lead-pencil some two inches long, solid, with a flange surrounding either end, the upper one, for the percussing finger, about $\frac{5}{8}$, the other $\frac{3}{8}$ inch in diameter.

Mr. Spencer Wells recently removed a pregnant (six months) uterus, with the ovaries, for epithelioma of the cervix—the first case on record. Patient recovered from the operation—whether from the disease or not remains to be seen. Billroth performed (but did not record) a similar operation several months ago. His patient recovered also, but soon died from recurrence of the disease. Mr. Wells, in presenting a report of the case to the Medico Chirurgical Society, expressed his belief that radical measures were usually necessary in cancer of the cervix; that destruction of tissue by knife and caustic, after Marion Sims, rarely offered a probability of success.

Mr. Reeves has been discussing the relative merits of gastrotomy and œsophagostomy in stricture of œsophagus (particularly cancerous) not dilatable. He urges the opening of the œsophagus, unless stricture is very low, as more practicable and less dangerous. Unfortunately, his opinion does not, as yet, rest upon clinical experience, and is not very warmly endorsed by his brother surgeons. His operation for genu valgum, however, by chiselling away the condyle, and opening the joint, is recommended by several surgeons of experience.

Mr. Lister and his colleagues have been for some time treating transverse fractures of the patella by cutting down upon the bone

and passing silver wires through holes bored through the separate fragments, the ends of the wires being then twisted together so as to hold the fractured surfaces in close apposition. It was claimed that the operation was (under the spray, of course) without danger, and secured the firmest possible union. I say *was* claimed; for since, in one instance, the knee-joint suppurated, we have heard less of the immunity of the operation.

At Moorfields Eye Hospital, the rage just now is "retinoscopy." With the mirror (about 9-in. focus) held forty-eight inches in front of the eye, light is thrown in at the usual angle; the mirror is then rotated on its vertical axis; if a shadow encroach on the illuminated pupil on the same side as the advancing edge of the mirror, the eye is myopic more than one diopter; if shadow appears on the opposite side, the eye is hypermetropic, emmetropic or myopic less than one diopter. Further examination reveals details which I won't inflict upon you; the method is certainly convenient and efficient for detecting certain anomalies of refraction, though it furnishes no information which can not be acquired by the usual methods.

The Listerian precautions are by no means universally practised here. In King's College Hospital, it is true, all the general surgeons follow the example of their chief; in St. Bartholomew's, on the other hand, better results are obtained by the "septic" method. In the Samaritan Hospital for Women, Mr. Thornton performs an ovariectomy one day with all the paraphernalia so fatal to bacteria; the next day Dr. Bantock makes an ovariectomy with scarcely a "smell" of carbolic acid. Between the two extremes may be observed several grades of caution; some omit the spray; others use it as a matter of form, and if at the end of the operation it is discovered that the carbolic acid bottle is empty, and that the spray has been simply steam, or if the perverse machine suddenly stops in the midst of the performance, and obstinately refuses to go, nobody feels very bad about it; it's a "good joke on Lister"—nothing more. The bacterial hallucination sometimes presents amusing phases. Not long ago a rigid apostle of Listerism made an amputation at the hip. The dressing was applied over the same regions as the gauze of a ballet-dancer. Whenever the patient desired to evacuate his

bladder (fortunately it was a "he") the house-surgeon or dresser was summoned; the spray was directed so as to shower the patient's torrid zone; the dressing was carefully loosened, the necessary organ was fished up out of the depths and directed over a vessel, and then the gentle gurgle of the escaping renal secretion mingled sweetly with the murmured admiration of the bystanders, the fizz of the faithful spray, and (presumably) the teethgnashing of baffled bacteria. Needless to say that the patient died.

W. T. BELFIELD.

CAPSICUM ANNUUM IN METRORRHAGIA.—M. Cheron in the *Revue Med. Chir. des Mal. des Femmes*, recommends strongly cayenne pepper in all forms of uterine hæmorrhage, whether due to fibroid tumors or to fungous endometritis, or even to epithelioma. He was first led to essay this remedy by the good effects observed from its use in hæmorrhoids. A large number of physiological experiments led him to consider it as having a special action on the vascular system, and hence on organs very rich in blood vessels, such as the utero-ovarian system, the organs of respiration and the brain.

Cayenne pepper acts like ergot on the non-striated muscular fibers of the vessels, either directly or through the vasomotor system, and it has the great advantage over ergot that it is well supported by the stomach, acting as a stimulant to its functions. The medicament can be given in pill form, two grains before each meal, increasing to four grains, or the watery extract in the same dose, or in tincture, much diluted and given more frequently.—*Med. and Surg. Reporter*.

Domestic Correspondence.

ARTICLE VIII.

NEW YORK LETTER.

EDITORS OF THE CHICAGO MEDICAL JOURNAL AND EXAMINER.
—New York is not falling away at all in the activity among its medical societies. A new one has recently been organized under the title of the *Materia Medica Society*. It will devote itself to the subject of drugs and therapeutics. The gentlemen who have been most energetic in getting it up are wide-awake and competent persons. Some of them, such as Dr. Piffard and Dr. Castle, have paid more than ordinary attention to therapeutics. The former has some peculiar views, which, if not homœopathic, are rather heretical. We have a *Therapeutical Society* in the city, and it would seem rather unnecessary to have another whose objects must be very nearly alike. It is said, however, that the *Therapeutical Society*, though it has done some good work, is now moribund, or at least very inactive.

At a meeting of the *Medico-Legal Society* some time ago, Dr. T. D. Crothers read a paper on *Trance-States in Inebriates*. The speaker contributed a large amount of valuable clinical matter to the subject of inebriety. This he considers as unquestionably a disease. During it, there not very rarely occur conditions of blanks in memory and consciousness. He terms these *trance-states*. The patients act then like automata and do things for which they are not at all responsible. Hence the medico-legal interest. The state described is a very curious and interesting one. The society met again last week. Dr. Johnson, of Brooklyn, read a paper on the *Medico-legal Relations of Anæsthetics*. One of the most interesting points brought out was whether it is

justifiable to give an alleged criminal an anæsthetic in order to make him confess. Of course, the opinion was given that this should not be done, on the legal ground that we have no right to make a man criminate himself. As physicians, the question of most interest is whether such a process as chloroforming could bring out any confession that would be of real value. There is yet no evidence that any testimony, in itself trustworthy, could be elicited in such a way. The discussion on the paper was postponed, however, in order that the Society might elect officers and have a supper. There was a dead-lock when it came to the election of President,—but nothing interfered with the supper. Indeed the novelty of mental harmony and abundant diet seemed so pleasing that one enthusiastic member moved that the annual supper be held every month. This was acceded to in so far as to vote for another supper at the next monthly meeting. The Medico-Legal Society is a kind of hodge-podge of good and bad material; of doctors who want to be experts, and lawyers who want to talk. It has in it, however, some most excellent men in both professions. It has also a large membership, an excellent library, and it publishes a regular bulletin of its proceedings. There has been a lack of harmony and rather a falling back in its work of late. Dr. Hammond withdrew last spring because he thought himself unfairly treated when he presented the subject of mesmerism at that time—and there were some other disaffections. The coming election of officers is expected to restore peace and prosperity.

At a meeting of the New York Academy of Medicine, recently, Dr. Taylor read a long paper on the subject of reflex disturbances of the sexual organs in women. The gist of the paper was to the effect that unmarried women are sometimes subject to very severe constitutional disturbances, due to the fact that the sexual function is not employed. Furthermore, such women may suffer and be chronic invalids from this cause without at all knowing what is the matter. The clinical facts cited in proof of this statement were somewhat startling, when taken alone, as they went to show that the sexual feeling in woman is very powerful, and that the inability to gratify it is sometimes attended with very serious consequences. Dr. Taylor said, however, that there

was a remedy for the threatened danger. This remedy lay in active and regular physical exercise, and in a systematic employment of the mind. The discussion at the close of the paper was much more personal than scientific, and in no way added to the interest of the meeting. Dr. Fordyce Barker referred to the fact that the subject was a delicate one, but he thought it ought to be carefully discussed. Dr. Lewis Sayre then rose, and in his most vigorous style denounced the character of the paper, and said that he did not think the facts given ought to go out endorsed by the Academy. The reader of the paper had virtually intimated that single women are in danger of losing their health if the sexual function were not employed. If medical men endorsed such a view, and it should get abroad, what an incentive to, or excuse for, immorality would be given. It was said, in reply to this, that Dr. Taylor had only stated that in rare cases women might suffer from the cause mentioned. If this were so, the fact should be known to medical men and taken into account by them. The preventive measures of regular bodily and mental exercise could be employed.

You are aware, probably, that Dr. Wm. J. Morton, of this city, has purchased the *Journal of Mental and Nervous Diseases*, heretofore edited so ably by Dr. Jewell, of your city. Dr. Morton will now assume the sole editorship of it.

The proposed new weekly medical journal to be started in opposition to the *Record* is not to be published,—at least this is the latest report. Not enough money could be raised for it. In part, perhaps, to supply its place, Dr. I. M. Hayes is to make his monthly *News and Abstract* a weekly journal. He has visited the city here and secured some persons who will furnish him with the society news here. Some of those who were to have been connected with the proposed New York weekly will now work for the new Philadelphia journal. Philadelphia has already three excellent medical periodicals, all standing well. It is not easy to see that there is room for another.

The number of students in the colleges here this winter is perhaps somewhat smaller than it was a year ago, but the difference is not great. Bellevue, which lost a good many students by its attempts to have a three-years course, has gained

somewhat in numbers the present year. The College of Physicians and Surgeons fully holds its own under its changes. Considerable talk was made about the retirement of Dr. Thomas from the chair of obstetrics. This amounts to nothing, since he has not lectured on obstetrics for several years—Dr. McLean, his associate, doing all this. Dr. Thomas gave a series of didactic and clinical lectures on gynæcology. These were very popular, but chiefly so with students. Dr. T. is a very attractive speaker, and puts things in a very clear and telling manner. It is some time before one appreciates that he is telling you very elementary things.

There are a number of what might be called private clinics given in the city during the present winter. They are generally free, and are intended for the instruction of graduates rather than students. They are well attended, and are very useful. The lecturer is paid of course in the additional reputation and consultation practice that he gets. Dr. L. D. Bulkley gives a popular course on skin diseases at the New York Hospital. Dr. N. M. Shaffer also gives a very well-attended orthopœdic clinic at the New York Orthopœdic Hospital. This gentleman has shown himself to be an original and industrious worker. In a monograph on the hysterical element in orthopœdic surgery, published a couple of years ago, he added some very useful observations to the meagre literature of joint-neuroses, and his present lecture has laid down one rule with great emphasis. It is that the muscular spasm by which diseased joints are made more or less rigid is pathognomonic of an osteitis. It may be tested in the hip, for example, by strongly flexing the leg and thigh, then holding the pelvis firmly with one hand, and with the other rotating the thigh outwards, or gently flexing and extending it. There will be a spring-like resistance to any such attempts at movement, which is very characteristic. If a further test is required the patient is to be laid flat on the stomach. The pelvis is held with one hand and the knee grasped by the other. By lifting up the knee the psoas is put on the stretch. If there is osteitis the consequent muscular spasm will show itself very plainly. All these movements must be produced with the greatest gentleness. In a neurominosis there may be some such spasm,

but it is not persistent. The disappearance of the gluteal fold indicates little.

The physiological facts regarding muscular tonus may not be out of place in this connection.

It used to be thought that the muscles of the body were kept in a state of constant but slight contraction by a stream of nerve impulses sent out from automatic centers in the spinal cord; that the voluntary muscles through this means possess a *tonus*, just as the smooth muscles of the arteries do. The great proof of this was thought to be the fact, that when a muscle is cut across, the two cut ends retract. We now know that this phenomena is due chiefly to the striped muscles being elastic and, normally, slightly on the stretch. This is shown, in one way, by the fact that the muscles of the cadaver retract somewhat when cut, as do also those whose nervous supply is lost.

But, though there is plainly no physiological muscular tonus due to automatic spinal centers, there does seem to be a kind of reflex tonus, very slight in amount, perhaps, but of great physiological significance. Hang up a brainless frog by the jaw, having cut the sciatic nerve on one, say the right side only. It will be seen that the right leg hangs more loosely, and that the tip of the right foot hangs lower than the left. Now this same thing takes place when only the posterior (sensory) roots are cut, and also when only the skin is removed from the leg. Brondgeest has shown that by simply cutting the posterior roots that supply the sciatic the leg is lengthened. It is evident that the slight contraction or tonus of the muscles in the sound leg is due to a constant reflex excitation started at the periphery. This has been called the reflex tonus, and it is a different thing from the old simple muscular tonus. Its existence has a practical interest, inasmuch as it is concerned so greatly with the phenomena of disease, both as regards the points already referred to, and others. Pflüger, for example, has claimed for this reflex an importance in the production of animal heat. A large amount of heat is manufactured by the activity of the muscles. When at rest, of course very little chemical action goes on in them, and if they were perfectly at rest all the time a most important source of heat would be lost. The reflex tonus excites a slight degree of muscular

activity which is enough to increase the heat production. If the irritation of cold air be applied to the skin, the reflex tonus is excited, and by increased chemical changes in the muscles, more heat is developed. It is in this way, in part, that ordinary falls in temperature do not affect the bodily temperature. *Per contra*, when the air is warm the reflex tonus (which Pflüger calls the chemical reflex tonus) is lessened in amount, and the muscles, being less excited, produce less heat.

NEW YORK CITY, Dec. 15, 1881.

ARTICLE IX.

EDITORS OF THE CHICAGO MEDICAL JOURNAL AND EXAMINER:—In an article by Dr. S. V. Clevenger, in the November number of your journal, I was more than surprised to see certain personal references. Whether in a scientific communication it is in good taste to descend to personal villification, may be safely left to the judgment of your readers, but certainly statements along that line that are untrue cannot be in any way defended. The former professional relationship between Dr. Beard and myself can be of but little interest to others; but as the author of the article in question has seen fit to go out of his way to assert that "the junior (?) partner of the firm became disgusted with the trickeries of the senior, and has since the dissolution of the partnership," etc., etc., I desire simply to say that the writer not only has no authority to make such statement, but that it is entirely without foundation in fact. Our partnership was amicably dissolved, and our relations are now friendly.

Allow me simply to refer to a letter by Dr. W. J. Morton, in the December issue of the JOURNAL AND EXAMINER, in which reference is made to the methods known as general faradization and central galvanization. He speaks of them as "pernicious and unscientific;" says that "protest against indiscriminate electrization should be entered again and again, until no reputable physician would dare to PUMP, so to speak, electricity into or through his

patient," etc. Space cannot be allowed me here to show wherein these methods are both rational and scientific. This has been done elsewhere. This much may, however, be said, that, admitting the stimulating and tonic action of electrization, it can be no more unscientific to make the applications general, in those conditions where a general tonic action is indicated, than it is to submit the body to the influence of the shower bath, or the whole person to the action of the sunlight.

General faradization has, however, been used for so many years by numbers in the profession, with increasing gratification, that it seems strange at this date to read such an indiscriminate and wholesale denunciation as that indulged in by Dr. Morton. He might as justly object to anæsthesia, or in the use of Franklinic electricity, to treatment by insulation, which, although a good thing, might literally be termed a PUMPING IN. Among others, Dr. Vater, of the University of Prague, has, in a series of articles in the *Allgemeine Wiener Zeitung*, borne abundant testimony to the wide and varied therapeutic effects of general faradization.

Instead of subjecting the method to the test of theory alone, and then in his ignorance rejecting it, he has put it to the severer and more conclusive test of a patient and discriminating clinical investigation. Our work has been translated into German, and I may perhaps be acquitted of undue egotism when I say that it has been standard in Germany for years, and that the methods of general faradization and central galvanization therein described have been long used by some of her best men.

Rosenthal, especially, speaks enthusiastically of its value, and in this country, among others, Wier Mitchell understands and appreciates the benefits that follow its use.

As Dr. Morton, by his own admission (in answer to a question of mine at the last meeting of the American Neurological Association), has had absolutely no practical experience in the use of general faradization, some of the assertions in his communication to your journal can be safely characterized as somewhat premature and rash.

46 E. Thirty-first St., N. Y.

A. D. ROCKWELL.

ARTICLE X.

ELGIN, Oct. 17, 1881.

MESSRS. EDITORS:—In the October number of THE CHICAGO MEDICAL JOURNAL AND EXAMINER, just received, my attention is called to an anonymous article criticising my article in your August number, on "Extra-uterine Fœtation."

The article I allude to is on page 421, Article XIII. I hope you will let me answer him in your next JOURNAL. He asks many questions, and of course expects answers. If I did not answer them, some of the readers of your JOURNAL might think, as he says, that the article was a "rude hoax." He says, "when scrutinized by him, the narrative looks improbable on the face of it; and beyond the name of Dr. Rosencrans, bears no evidence of authenticity." Are not the names of two physicians who were present and assisted me given, and their places of residence—Dr. Sutherland, of Victoria, Texas, and Dr. Blake, of Cuero, Texas? He says, "he hopes another such operation was never performed in any other State."

This operation was performed under circumstances the most unfavorable. The patient, by long suffering, was reduced to a skeleton, praying for death. The operation was performed with only two assistants, when five would not be too many. "Article XIII" asks many questions; I will endeavor to answer as briefly as I can. First: "How was it I knew the patient was a subject for an operation, before performing the *unwarrantable* and dangerous operation of paracentesis abdominis?" Early in December, 1879, this patient called at my office, accompanied by her husband (Mr. Thos. Jordan) to consult me about her health. She thought she was pregnant, but felt differently from what she had in former pregnancies. She was certain that she was not right in her womb; stated that she was four months without her courses. My examination led me to think she was pregnant. I never saw anything more of her until I was called on 28th July following to see her at her residence. She had changed so I hardly knew her; she was emaciated, and showed unmistakable

signs of great suffering. She was on her hands and knees on the bed, referring most of her suffering to the lower portion of her back. Laudanum and bromide potassium were administered. This gave her relief, sleeping most of the night. In the morning she related to me that when she was "nine months gone" she was taken with "labor pains" which lasted all one night; that up to that time she had felt motion, but none since. I think the foetus died that night. I examined the uterus, and was sure there was not a foetus in it. Palpation and the extreme enlargement of the abdomen satisfied me that there was fluid in the peritoneal sac or in the cyst containing the foetus, if she was carrying one, and I believed she was. I stated to her and to her friends the necessity of an operation, explaining the nature of it. She begged to have it done, saying she would rather die under the operation than live and suffer any longer. It will be considered strange that she had not sent for a physician sooner. The only explanation is that they were poor and ignorant people, and she had depended on an old "midwife" in the neighborhood. Owing to her living in an out-of-the-way place, I advised her being carefully brought to town on a mattress in a spring wagon. The second day after that she was brought to town. I gave her a day to rest, and then performed that "unwarrantable and dangerous operation" of paracentesis abdominis. This gave my patient immediate relief, and enabled her to eat and retain food, as well as lessening her pain. This "unwarrantable and dangerous proceeding" prepared her better to undergo the operation of the 20th.

"Why was the operation delayed so long?" As I stated in my previous article, immediately after the operation of opening the cyst with the trocar, I was enabled to more clearly make out my diagnosis. I wrote it out, and sent it to Dr. Sutherland, of Victoria, inviting him to come as soon as possible and assist me in the operation. It was a week before he came, accompanied by Dr. Blake, of Cuero, and Dr. Hopkins, of Myersville, now of Victoria. They arrived on the 9th of October. We all repaired at once to see the patient. After an examination, they agreed with me that an operation was necessary, but that in her very miserable condition, hardly a ray of hope was left. We prepared

to operate next morning (10th). A violent storm of wind and rain sprang up that night, and in the morning the town was covered with water from the bay. The doctors would not remain, but left town, and half of the population of the place fled to the country for safety. (Doubtless it will be remembered that in September, 1875, a cyclone swept over that town, the waters of the bay drowning over 200 of its inhabitants, and half of the place was destroyed). This caused the delay of the operation until the 20th. Drs. Sutherland and Blake returned on the 19th. Dr. Hopkins was unavoidably delayed, which he regretted very much. At ten o'clock in the morning the operation was commenced, the patient being laid on the operating table and chloroform administered. So low was my patient at one time during the operation that it was whispered to me, "she is dead." She was allowed to recover from the influence of the chloroform, and brandy and water were fed her by the teaspoonful during the remainder of the operation. Critic says, "I cut and tore as on a cadaver;" yes, and what was a dead foetus, a rotten placenta, and every thing belonging to it but cadaver? I was inflicting no pain while dealing with those parts; I tore where it was not safe to cut. He quotes high authority why I should not have removed the placenta. I believe that any author he quotes would have removed it. Would he have left it? With a rotten placenta left in the patient's body, and the wound closed, I certainly think she would have died.

"Where did the placenta grow?" In the most dependent part of the cyst, to the right ovary. "Why remove the right ovary?" Because it was involved in the cyst. The pregnancy was a right ovarian one.

"To what did the cyst adhere?" To the abdominal walls extensively, and to the omentum. As stated in the former article, I cut away some of the omentum. I then ligated it with catgut, and returned it in its place. "Was there no peritoneum met, and what was its condition?" The peritoneum was "met" after cutting through the abdominal walls; its condition normal. It was first taken up carefully with a tenaculum, after the bleeding was stopped, then carefully cut an inch or so, then a grooved

director passed in, and a more extensive cut made. This brought to view the nauseous cyst.

Through this I could feel the foetus. I then first passed in a medium-sized trocar, but the thick fluid running but slowly, I removed the instrument, and boldly made a cut through the cyst, turning my patient on her side—taking the precaution not to let any of the fluid run into the abdominal cavity. "How was the peritoneum dealt with in closing the wound?" It was let alone. The wound was closed without including it in the stitches. "Were the bricks put on to compress the abdominal aorta?" The bricks were put on to prevent any oozing of blood from the small vessels.

The copious discharge of putrid matter through the drainage tube was caused by portions of the cyst I had to leave, not thinking it judicious to attempt to remove all, owing to the almost lifeless condition of the patient at the time. "Is it possible for any human being to endure such cold *so long* and live?" It certainly is possible, for my patient lives. He asks "if it was necessary to practice catheterism for a month?" He had better "scrutinize" the article again. Mention in it is made of using the catheter *one week* only. "Were opiates used?" A little at first. I gave her an opiate every night for the first week after the operation, for a twofold purpose, viz., to keep the bowels from moving off, and to give her good sleep. "What is the explanation of the high pulse?" Debility. "What was the cause of the long recovery?" The drainage opening was slow in closing, and it took time to gain flesh. She gained thirty pounds while convalescing. "What was the condition of the foetus?" It was in quite a good state of preservation, better than the umbilical cord; the latter was discolored and rotten. Counting this woman four months pregnant at the time I first saw her in December, and judging that it died the night she had "labor pains," the foetus must have been dead about three months.

H. ROSENCRANS, M.D.

Society Reports.

ARTICLE XI.

CHICAGO MEDICAL SOCIETY. Stated Meeting, November 21, 1881. Dr. E. Ingals, President, in the Chair.

PREDISPOSING CAUSES OF THE ALCOHOL AND OPIUM HABITS.

Dr. Mary H. Thompson read a paper having the above title. She started from the fact that dietary measures are as important in the human economy as surgical treatment. The use of too much wine at the table was in both sexes a frequent cause of intemperance. Another cause was found in the frequent prescribing of alcoholics and opiates to alleviate suffering, especially in women and in children, who form four-fifths of the ordinary patients. After a while, the patient prescribes for herself in hysterical troubles, slight headaches; or takes alcohol or opium simply as a stimulant. Then intoxication is a most frequent cause of accidents. It was a wiser measure to encourage the patient to bear pain until the cause of her disease was removed, and very unwise for mothers to dose their infants with paregoric or other opiates in order to induce sleep. She related a few cases of chronic opium poisoning in infants referable to the above cause.

Whisky is often a substitute for opium. It was an ascertained fact that patients had begun taking cod-liver oil with whisky, but soon dispensed with the oil and kept up the whisky. As a method of alleviating pain, she proposed that of Emmet, which consists in the external application of heat in the form of hot water to the extremities. She thought opiates should not be given in inflammations, nor after surgical operations, nor in septicæmia.

Females were more predisposed to form the opium habit, probably on account of a greater susceptibility to pain.

Hereditary tendencies and various circumstances act also as causes.

The action of narcotics is in ratio of the development of the brain, and their dose is not well ascertained. Dr. Thompson had met many cases of opium habits, and she knew several ladies, some from the best society, who had entered the hospital in order to be fed with opiates. Some accumulated doses until a couple of grains were reached, which they took at one dose, to get the full effect of the drug. The doctor proposed the following questions, which remained unanswered:

1. What was the immediate effect of alcoholics on the liver?
2. How can we prevent the habits?
3. And after these have formed, how should they be remedied?

DISCUSSION.

Dr. Odelia Blinn stated that overwork, which is a characteristic of the people of this country, was a most frequent cause of intemperance. Another cause was the poor diet on which the working class fed; they endeavored to supplement the quality of their food by a large imbibition of alcoholics. Her experience had been that a moderate use of diluted alcohol increased the appetite and helped digestion in healthy people, and was especially useful when the vitality was sinking in various diseases. Narcotics, she thought, were too easily procured by the people at large.

Dr. S. R. Millard agreed with the lecturer, that prescribing narcotics was a frequent cause of the opium habit.

Dr. Allport thought that the external use of heat, as recommended by Dr. Thompson, produced a withdrawal of blood from congested centers, and was a most efficient palliative of pain.

Dr. S. J. Avery said that we had not yet found a substitute for the anodynes. In pneumonia, he had found alcohol the best remedy; and the same was true of opium in peritonitis. Instead of creating an appetite for stimulants, it had been the reverse; his patients had never kept up the habit. He believed in hereditary tendencies.

President E. Ingals, an absolute believer in temperance, thought he had been fortunate not to come across any habitual drunkard or opium eater who could refer his habits to a physician's treatment. He always prescribed opium and alcohol in diseases in which he expected good from their use, except in cases of reformed drunkards.

Dr. C. W. Purdy stated that an infusion of absinthe was a good substitute for alcohol whenever one wished to break the habit of drinking. It should not be taken too long. He believed that opium acted as something specific in inflammation, and that nothing equalled Dover's powders to break a cold.

Dr. W. H. Curtis read a paper, an abstract of which follows :

DISPOSAL OF THE DEAD.

Cremation among the Greeks and the Romans was reserved to the chiefs and considered a high honor, but it also solved the problem of a quick destruction of the dead during the wars of the empire against the barbarians. The first Christians buried their dead in the catacombs, and the wish to be buried with martyrs and saints gave rise to intra-mural burying. After all, it is a difficult matter to convince the people that death levels all. Burial does not render the body innocuous, but is a cause of pollution of the water, of the air, and a direct danger in opening graves.

The question of interest on the part of societies and trades had always been powerful. Laws prohibiting intra-mural burying grounds were early edicted by popes and bishops. Epidemics of pestilence due to that cause have been referred to by Ambrose Parè. However, the lecturer did not believe that the exhalations from dead bodies could give rise to any one disease in particular, but fed the germs which facilitated the spread of all the infectious and filth diseases. Dr. Curtis then related the experiments of Pasteur in anthrax, and the manner in which the germs of the disease are brought to the surface by earth-worms which feed on cadavers. (See the JOURNAL, November, 1880). He was satisfied that the germ theory explained everything concerning infectious diseases. That the dead kill the living is only too true. The decay of organic matter is proven to be a most common

cause of disease and death. How, then, shall we dispose of the dead? It is a false sentiment which is manifested for inhumation. There is no possibility for our bones to be left undisturbed. Millions have been buried in small graveyards. Body snatching is on the increase, and no one is protected against it by inhumation. And the security of the dead necessitates such expenses as cannot be borne by the poor. Besides, in every one exists at certain times some dread of being buried alive. In some it becomes a subject of paramount importance. We can seldom reach a positive evidence of death. But cremation would remedy all this. It is the only advisable means for disposing of the dead without any harm to the living.

The disadvantages are few. Cases of poisoning are rare, and the detection of vegetable poisons is practically impossible in the exhumed body. Cremation was costly in the pursuance of rites, but very cheap in the burning of martyrs.

By the Siemens process the body does not come in contact with the fire, but is cremated by a great heat generated outside the retort.

The cost would average fifteen dollars, and would thus be very accessible. However, expenditures were of little account, and people will, as ever, lavish money on the dead. The lecturer considered cremation a present necessity, while it was at the same time a mark of progress. There was no room, and should not be, for such plagues as our present cemeteries. "Man should become a handful of ashes, and nothing more."

In America, there was nothing but individual sentiment and prejudice against cremation. There was no law against it, and the American people are so practical that their notions are readily turning in favor of cremation.

Dr. Roswell Park exhibited a piece of wood $2\frac{1}{2} \times \frac{1}{2}$ inches in size, which he removed from the superior maxilla and zygomatic fossa of a child fourteen years old. It had been retained fifteen months, and had given rise to sinuses in the soft palate, in the nose, and beneath the orbit.

Meeting held October 3, 1881. Dr. E. Ingals, President, in the Chair.

IS THERE A CHRONIC CARBOLIC ACID POISONING?

Dr. Andrews read a practical paper on the above question. He began the use of the antiseptic treatment fifteen years ago. A few objections had since arisen as to the use of carbolic acid. The spray was a fine mist of steam, which did not always kill bacteria, which, it has been proven, pass sometimes through it intact, though they always die when they come in contact with the surface of the body wet from a condensation of the carbolized steam; a lotion of carbolic acid, then, is all that is necessary. He had performed but few ovariectomies, but he believed the spray very efficient in such cases. The use of the McIntosh cloth sometimes produced an intense heat, partly from impeding perspiration, and this had proven a serious difficulty whenever a large surface of wounded tissues was exposed, as in amputation of the breasts. In such cases, he removed the dressings more frequently. Thus, many of his patients had their dressings renewed twice a day. But there must have been a greater absorption of carbolic acid under these circumstances. After a week or ten days he has met with vomiting and irritation of the stomach in some cases. Was that due to a sort of chronic carbolic acid poisoning?

Not long ago, a patient had both of her breasts removed for the second time on account of sarcoma. The McIntosh cloth was not used. Vomiting set in the tenth day. The urine was not darker than usual. The doctor replaced carbolic by salicylic acid, and the patient got well.

Another patient presented himself at the hospital with a fluctuating abscess in the thigh, which proved a psoas abscess. Dr. Andrews aspirated. Later, mortification set in, which was treated with injections of carbolic acid, but these could not reach the deeper parts of the abscess. After a week or two, vomiting set in, and continued after salicylic had replaced carbolic acid. Has seen many cases resulting in that same manner. Carbolic acid being an alcohol, may it not produce a sort of intoxication in its systemic effect? Or does it act only as a local agent? It is

asserted that carbolic acid resembles arsenic in this last particular. Thymol he found more irritating when used in $2\frac{1}{2}$ per cent. sol., while he does not believe in its efficacy if used one part in five thousand.

Dr. Andrews made the suggestion, as a conclusion, that anti-septic dressings should be left undisturbed for days, as Lister proposed.

Dr Holmes presented an abstract of two cases which have been more fully reported in Knapp's Archives of Ophthalmology.

I. Mrs. H., forty years of age, while sitting quietly with friends, experienced a very sudden excruciating pain in the left orbit, followed immediately by great swelling and protrusion of the globe between the lids. All motion of the eye, as also its vision, was destroyed. A loud aneurismal murmur was at once observed by the patient. This could be distinctly heard when the ear was placed on the head, especially near the left orbit. On account of the shock and continued excessive prostration, surgical interference was delayed from day to day.

By the request of Prof. Etheridge, the attending physician, I had an opportunity of examining the eye two weeks after the attack. At this time the patient seemed too weak for the treatment of aneurism by the use of *veratrum viride* or by injection of a styptic into the sack. Pain was relieved by opium, which was well tolerated. The cornea, which was becoming opaque, was kept moist and protected from the air. The propriety of ligating the carotid artery was considered in consultation with Prof. Gunn, when, fortunately, in two days, the symptoms began spontaneously to abate. At the end of two months the pain, swelling and pulsating sounds had entirely disappeared. The globe was atrophied.

As the patient began to improve, it was observed that there was almost complete paralysis of the left side of the face. There appeared also, at the same time, loud râles in the left side of the chest, attended by a severe cough. These symptoms continued through life, although the general health became unusually good.

At the end of two years Mrs. H., without the slightest premonition, died suddenly at the breakfast table. No autopsy was

obtained. Although no disease of the arterial system could be detected, there was undoubtedly a weak condition and rupture of an artery in the orbit, and finally in the brain.

II. Traumatic loss of the iris.

Mr. D., aged sixty years, received a severe blow on the right eye from an iron lever. There was considerable hæmorrhage, with total loss of sight and great pain. The latter symptom speedily subsided. Vision returned sufficient to enable the patient to walk alone in localities in which he was acquainted.

Two years after the accident, in examining the patient for a disease of the other eye, I learned the short history just recorded. I observed that the iris was entirely absent in the right eye. Near the periphery of the cornea, at the inner angle, was a small dark scar in the conjunctiva, the seat, probably, of the rupture of the walls of the globe, through which the iris was forced.

The lens remained in its normal position, slightly cataractous. Accidents of this nature are very rare.

ARTICLE XII.

CHICAGO MEDICAL SOCIETY. Stated Meeting, December 19, 1881.

Dr. G. C. Paoli occupied the chair, while President E. Ingals, read the paper of the evening on

THE MANAGEMENT OF PARTURITION.

The writer thought that we would gain as a profession if, instead of so generally directing our investigations into the unexplored and unknown, we would sometimes retrace our steps, and reconsider and reappropriate practices that have been discarded or forgotten.

No class of patients merit our sympathy more than women when in the pangs and perils of labor, and to none do the arts of our profession bring more substantial benefits. Neither physicians nor laymen fully realize the degree of skill which is habitually exercised by the practitioners of obstetrics, or the benefits they confer on those who receive their professional

ministrations. Every obstetrician is often obliged to perform operations that require more knowledge, judgment, courage and skill, than do the acts of the surgeon; and they are hardly spoken of beyond the room in which the service is rendered, and should the obstetrician ask such a fee as the surgeon would exact for less difficult operations, the demand would be thought exorbitant. This is because the occasions for obstetric operations are so common, and they are skilfully performed by so many. Considering the skill required, the great responsibility assumed, the unseasonable hours and exhausting labors which the practice of obstetrics involves, the pecuniary returns are more inadequate in this than in any other branch of the profession.

The Lying-in Chamber.—The lying-in chamber should be—like every sick-chamber—retired, spacious, pleasant, and capable of being thoroughly ventilated without drafts. The invalid of a house should always be entitled to as good a room as there is in it. An open grate, and a fire in it when the weather will permit, is especially desirable. This matter of the healthfulness of the sick-room is of vastly more importance than is realized. It would overcome the vitality of the most robust person to lie down for a month in a small, closed room, in cold weather heated by a stove, constantly occupied by mother, child and nurse, with floral offerings on the stand, and in which many visits of congratulation are received. The depressing effects of this atmosphere are obvious enough to the physician in the few moments of his professional call, but the patient, becoming habituated to it, is unconscious how impure the air is that she breathes; and wonders at her lassitude, and that she gets up so slowly. But few persons should be admitted to the chamber. During the labor the physician, nurse, and one other female attendant are better than more, and the absence of the husband is generally desirable.

During the first two weeks the patient should be kept excluded from callers; only a very few of her most intimate and judicious friends being allowed to see her for brief periods and at long intervals. We will suppose the patient is seen at the commencement of labor. The manner of the medical attendant in the sick-room is important. He should be quiet and cheerful, and so conduct himself as to impress on the patient the conviction that

he feels a genuine interest in her behalf, and that he is competent to conduct the case to a successful issue. I have seen attendants on these occasions who were brusque and rude, with veterinary airs quite unsuited to the place. It is a great point gained when an early examination enables the physician to assure his patient that the presentation is favorable, and that the case may certainly be expected to reach a safe termination. If, however, anything is unpromising, it is best that the patient should be apprised of it; the information being accompanied with the assurance that the difficulty is not beyond the reach of obstetric skill, though it may cause delay and difficulty. This will increase the confidence of the patient in the candor and knowledge of her physician, and will cause her to endure whatever she may be called to bear with increased courage and patience.

If the patient is a primipara, it is better to tell her that she has before her a painful ordeal, that will demand all her fortitude; but that it is only what all mothers have met and passed, and that her rewards will abundantly repay her sufferings. During the first stage of labor the patient may lie down, sit up, or walk about the room, as suits her comfort and inclination, but it is best she should not take too early to the bed. If the lower bowel is not empty, it should be relieved by an enema. When the womb is only commencing to dilate, it is not necessary that the attendant should remain in the house, though he should see the patient often enough to note the progress made, and to relieve her mind from unnecessary anxiety, an examination being made every one or two hours, as the case seems to demand.

The position of the patient during labor is not essential, though most patients prefer the back, and I think it is best, though this may sometimes be advantageously alternated with that of the left side after the labor is well advanced. The placenta is best delivered when the patient is on the back, as in this position the womb can be more effectually manipulated. Should there be considerable pain for a number of hours and no consequent dilatation of the os uteri, morphia should be administered, for such pains are worse than useless. They increase the irritability of the womb, and the organ is contused and injured by its own unavailing contractions. The anodyne will allay the irritability

and promote the dilatation of the os. Patients often attempt to hasten delivery by voluntary expulsive efforts of the abdominal muscles. This both retards the labor and exhausts the strength of the patient, and if permitted at all it should only be when the labor is nearly completed. Such voluntary efforts, however, render valuable aid in the expulsion of the placenta.

During the progress of dilatation all manipulation of the os is injurious. If the labor goes on favorably its progress should be mainly trusted to the spontaneous influences of nature's processes. On this point, however, I do not wish to be misunderstood, for I do not fully endorse the oft-repeated maxim, that "meddlesome midwifery is bad"—for non-meddlesome midwifery is no better, and the judgment of the practitioner is equally shown in knowing when to meddle and when to "stay the obstetric hand," when the soft parts are perfectly relaxed and the dilatation of the os is complete—but not before; if the membranes resist the contractions of the womb they should be ruptured by the attendant. The womb, no longer protected by the amniotic fluid, is excited to increased contraction by contact with the irregularities of the child's body, while its lessened size enables its muscles to act in shorter circuits with increased power. When flexion is taking place this may sometimes be aided and the termination of the labor hastened by pushing the head upward in the absence of pain, so as to free it from the pubes, and then with the finger pressing the occiput forward and downward when the pain returns.

In supporting the perineum it should be gently drawn a little forward. When the perineum is ruptured—and there is no skill or care that will always prevent this accident—the nurse should keep the wound cleansed by proper ablutions and leave it to heal without surgical interference. I have always treated this injury in this manner, and I have never had a ruptured perineum occurring in my own practice that required a surgical operation. In very infrequent cases, the laceration is so extensive as to demand an operation, but if so the operation should be secondary. The patient will be better able to endure it after she has recovered from her confinement, and it may then be made on healthy tissue.

After the child is born I try and get the placenta soon and seldom allow it to remain longer than ten minutes. Its early

removal lessens the danger of hæmorrhage ; it puts the patient's mind at rest, and the womb acts better if it is not suffered to remain too long in a state of repose after its contractile efforts on the child have ceased. For this purpose contractions are best secured by manipulations through the abdominal walls, but if the adhesions of the placenta are not soon broken up, or if there is hour-glass contraction, or inertia of the womb, it is better to introduce the hand into the cavity before the os becomes contracted, or the soft parts sore, after the child has passed. During the delivery of the placenta the attendant's hand over the womb should give him constant assurance that the organ preserves its globular form. With this precaution I do not understand how inversion is possible. As a security against post-partum hæmorrhage, the hand should be kept constantly over the womb for about one hour after it is empty, to detect and prevent any tendency in the organ to fall into a state of inertia. Auxiliary to these manipulations, if bleeding is feared, $\frac{3j$ of the fluid extract of ergot should be administered when the child is nearly expelled or immediately after. Ergot seems to be a hæmostatic, but I have not much confidence in its power to excite uterine contractions, and I think it is best that we should place little reliance on it for this purpose.

When the dilatation of the os and soft parts is complete and the pains are insufficient, I would use forceps rather than suffer too much delay, even in cases that would finally terminate without such interference ; but if the delay is from inertia, care must be taken not to empty the womb until we feel assured that its contractions may be made to follow the slow extraction of the child. The skillful use of forceps is not a source of danger, and when two or three hours of agony can be saved to the mother it is no small consideration. The physician should never use instruments for his own convenience, but only in the interests of the mother or child. If the head can be made to present I would never attempt podalic version. With this presentation the operation of turning is more difficult and dangerous than delivery with the forceps, and I have never attempted it, under such circumstances, without having had occasion to regret it. I cannot adequately recount the praises due the obstetric forceps.

It outranks all else in the armamentarium of surgeon or physician. No other instrument has cut short so much suffering or rescued so many lives. I can easily excuse the anathemas which Dr. Slop poured out on his servant Obadiah, for having tied his in a green-baize bag, with good, hard, honest, devilish tight, hard knots, made *bona fide*, so that the Doctor was unable to reach it in the moment of emergency; anathemas that forced the gentle Uncle Toby to exclaim, "our armies swore terribly in Flanders, but nothing to this—my heart would not let me curse the Devil himself with so much bitterness;" and all this, though the forceps threatened some sore misfortunes to the luckless Tristram, then in the imminent moment of his nativity. The blades, too, have been applied to ornamental, as well as useful, purposes. You will remember that after our city was consumed by fire, many preserved as mementoes of the conflagration various objects found among the debris. Almost the last of these to remain are a lot of the blades of obstetric forceps, which I have annually seen stuck in the earth surrounding a flower bed in private ornamented grounds. I could never quite satisfy myself whether the blades were placed there entirely in the interest of decorative art, or whether the horticulturist did not have a latent belief that they would help to make the flowers come out.

The abdominal bandage after labor, although not indispensable, affords much relief and prevents hæmorrhage. An old linen towel, reaching from the pelvis to the thorax, answers the purpose. After delivery, the bowels are generally paralyzed and constipated, and it used to be the custom to move them in two or three days. Dr. Ingals made it his practice to allow them to remain so for four or five days, and he thought the administration of castor oil was liable to be followed by constipation. He prescribed an enema instead.

As to the diet, it required some attention, the digestive system being generally impaired. He believed potatoes were then specially indigestible. Four or five days after labor, excessive perspiration may take place, and is best relieved by 10 or 12 grains of quinine, though it has nothing to do with malaria. The patient should not use her eyes for reading or needle-work for a month after confinement. A number of patients lose their hair

during convalescence. The tr. of cantharides, one part, to five of alcohol, is a good application. No patient should get on her feet before the ninth day.

Discussion.—Dr. G. C. Paoli thought it was not always possible to select a good room, and he believed it was criminal on the part of proprietors to rent to poor people basements unfit for any one to live in. As to the use of ergot in labor, he had used it favorably, but the tr. or fl. extr. were not worth much. Half grain doses of ipecac had a special power for contracting the os uteri. He referred prolapse of the womb in many cases to an early recovery from labor, and the parturient woman should not get up till the twelfth day. He regarded the bandage as something indispensable, but a flannel bandage is preferable, on account of perspiration.

Dr. W. T. Montgomery stated that cases of asthenopia are often referable to straining of the eyes after labor. He recommended as a prophylactic against hæmorrhage, to keep the feet and hands of the patient warm.

Dr. Jane E. Walton made it her practice to get the patient up early, that is, not later than the twelfth day; and recommended the use of forceps whenever convenient.

Dr. E. F. Ingals made the query, Does the use of forceps predispose the child to convulsions afterward? He had seen convulsions occur after six months in one case, and after a few weeks in another. He recommended disinfecting injections after labor. They were grateful to the patient. Also, ablutions three times a day.

Dr. E. Ingals, in reference to vaginal infections, said that they should be used whenever something had been retained, and whenever the lochial discharge had an offensive smell. He did not believe that the use of forceps increased in any degree the liability of infants to convulsions. In bad cases of post-partum hæmorrhage he emptied the uterus of all clots and pressed its walls over one hand inside, with the other hand holding the uterus through the parietes of the abdomen. He regarded this as a more efficient compression of the aorta than if pressure was made over the latter. He did not believe that ergot produced contraction of the womb, as generally supposed.

Dr. Tucker agreed with him on that point.

H. D. V.

Editorial.

ARTICLE XIII.

THE preliminary announcement of the Medical College, lately organized in this city, has been laid before the members of the profession. Its published announcement of its proposed methods of securing competent medical instructors has also in these pages been given to the world. The ground for the new building has been purchased; and, in brief, it may be said, that the college is practically before the profession and the public to be judged upon its merits.

However much the supposed necessity for the multiplication of new schools in medicine may be deplored, it is certainly gratifying to note that each, as it comes forward, acknowledges the imperative necessity of announcing a broad advance in the standards and requirements for its matriculates and forthcoming graduates. The Chicago College of Physicians is no exception to the rule. The Board of Directors declare that the institution is "formed in the interests of a higher and more thorough medical education; and that they intend to make its organization, equipment and plans of teaching so excellent and complete in every particular, as to enable it to take rank with the foremost medical schools in this country. The highest practical standard of preliminary acquirement will be fixed and exacted; a pupilage of at least four years, including a graded course of instruction covering at least three full winter sessions, will be compulsory; and the most satisfactory proofs of proficiency in every department of medical knowledge will be required of all candidates for graduation. The examinations for a degree will be conducted by a

committee of examiners separate and distinct from its teaching corps."

Certainly this is a high and worthy standard; and if it shall be rigidly maintained and successfully applied, not only the medical men of this State, but the profession throughout the Northwest, will have reason to be thankful that the new medical school was called into existence. Such an institution needs no excuse for its existence. It is itself the best explanation and apology for its perpetuity. Its *raison d'être* is the survival of the fittest.

BOOKS AND PAMPHLETS RECEIVED.

Manual of Midwifery. By Alfred Meadows. Fourth Edition. G. P. Putnam's Sons.

Diseases of the Eye. By Henry D. Noyes, M.D. Wm. Wood & Co. Medical Library, 1881.

Handbook of Uterine Therapeutics. By E. J. Tilt, M.D., London. Wood's Library, 1881.

A Study on Tumors of the Bladder. By Alex. W. Stein, New York. Wm. Wood & Co.

Frozen Sections of a Child. By Thomas Dwight, M.D. Wm. Wood & Co.

Suppression of Urine. By E. P. Fowler, M.D. Wm. Wood & Co., 1881.

Lectures on Electricity. By A. D. Rockwell, M.D. Wm. Wood & Co., N. Y.

Pocket Book of Physical Diagnosis. By Dr. Edward T. Broen. Blakiston, Philadelphia.

THESE are the characters by which you are to recognize a hernia of the epiploon alone: The tumor is dull, and presents no gurgling on pressure; you will find these signs described in your books, and they are deceptive, for an entero-epiplocele presents these characters; but one symptom, to which I most especially direct your attention, is the narrowness of the pedicle of the hernia, and the almost complete indolence of this on pressure, joined to the absence of a resistant plane behind the ring. This narrowness of the neck is explained without difficulty, when we recall the texture of the epiploon. We understand very easily that the fat may be depressed by the constricting band, as by a thread.—*M. Desres, in Gazette des Hôpitaux.*

Condensations from Late Editorials in the Medical Press.

PSYCHOLOGY IN PHYSIC.—In an article on “Doctor and Patient,” our versatile contemporary, the *Spectator*, lays it down as an axiom that “to be a really good physician, a man must be a psychologist;” by which he means that the inner nature, or heart, or soul—call it what we will—of the patient must be taken into account in every diagnosis and in every scheme of treatment, as part of the case, and of the subject as a whole. This is undoubtedly true. Whatever may be the causal relations between mind and body, the mental part of man’s being is not less real than the material, and it plays an equally realistic part in the production of disease, the constitution of morbid states, and resistance to remedies. The practitioner who should leave the mind out of consideration in the study of disease in the concrete, or disregard it in the plan of treatment he adopts, would be closing his eyes to half the task he undertakes, and throwing away half the means and power by which it is to be accomplished.
—*London Lancet, November.*

VIVISECTION.—Three of the addresses delivered at the late meeting of the International Medical Congress dealt with the subject of the value of experiments on living animals. Each was written by a master hand, fully competent for the task, and presented the arguments in favor of such experiments from a different point of view. Professor Fraser demonstrated how necessary such experiments are to scientific investigation in pharmacology, and illustrated from his own experience how completely the present act for the Prevention of Cruelty to

Animals has stopped progress in this direction in our own country. M. Simon, in his address, showed the good results such investigations have already rendered to preventive medicine, in particular, and pointed out the abundant harvest yet to be reaped in the same fields of labor. Professor Virchow made a powerful appeal for perfect freedom in scientific research, and conclusively showed that our present knowledge of life is founded on experiment, and that the only reliable and practicable means of increasing and perfecting it is also experiment.—*Idem*.

BACON AND MICROSCOPE.—The organization of laboratories in which foreign bacon shall be examined is announced. A school, or rather a course of micrography and helminthology, will be organized, with the aim to create in France an army of inspectors, whose mission shall be to protect us against the invasions of parasites through the most useful aliments. (The editor reviews here, in a sarcastic tone, the trichinosis scare, and quotes the *Marseille Médical*): "From Feb. 24 to May 28, 1881, a special commission, under the direction of M. Marroin, made thirteen examinations, looking over 5,229 specimens of bacon. 24,839 histological preparations were made. Among these 70 were found to contain trichinæ, or an average of $\frac{1}{3}$ per cent. These represented 1,229 barrels, containing hams, salt pork, ribs and steaks. About 9,000 barrels came under the supervision of that commission, giving an average of 0.77 trichinosed barrels in 100; or about 0.031 of trichinosed pieces in a hundred. The examinations made at Havre failed to discover any trichinæ at all.

"We must acknowledge this, that the meat exported from America presents a pretty good appearance, and could not be that of diseased animals, if we pay attention to the quantity of adipose tissue which it contains."

In view of these results, which do not render it possible to affirm in every case the wholesome nature of the meat examined, it seems that England was wise in abstaining from any coercive measures, adopting the principle that the best preventive of trichinosis consists in a good roasting or boiling of the suspected meat, and this is also a general rule in this country.—*Union Médicale et Scientifique du Nord Est, Oct.*

DOES VACCINATION PROTECT?—It is becoming somewhat tiresome to have to reiterate the truths about vaccination. And it will sometimes occur to us that the best way, after all, would be to leave the question alone, and let the people find out the facts for themselves. Why should the doctor worry himself? If the people do not and will not believe in vaccination, why not drop our quills, and, having vaccinated ourselves and families, let the disease work away in its old-fashioned seventeenth century style. In 1721, half of the city of Boston lay sick with the small-pox. Would not the return of such a visitation be better than any pamphlets or statistics?

We present here a very few of the facts and figures upon which this universal agreement is based. It should be remembered, however, that aside from statistical proof, nearly every physician, at some time during his life, gets personal evidence of the efficacy of Jenner's discovery.

Previous to the introduction of vaccination, the annual mortality from small-pox throughout Europe was about three thousand to every million inhabitants. During the forty years subsequent, the mortality from the same cause was reduced in Sweden to 158 per million; in Westphalia to 114; in Bohemia, Moravia, and Austrian Silesia to about 200; in Copenhagen to 286; in Berlin to 176; in England to 200.

In 1853, the Epidemiological Society received two thousand letters from medical men, affirming their belief, from personal experience, in the protective power of vaccination. Dr. Simon obtained similar answers from five hundred and forty eminent English and foreign physicians, out of five hundred and forty-two to whom letters were addressed.

One observer, Marshall, has shown that among 757 persons exposed to small-pox, 231 had been vaccinated, and of these latter only 27 took the disease. All the remainder, except seven, were infected. In 1871, an anti-vaccination excitement was fomented in England, and Parliament undertook to investigate the question. A large committee was appointed, and testimony taken from every quarter. The result was an overwhelming refutation of the points claimed by the anti-vaccinationists.

In the Franco-Prussian war, an epidemic of small-pox arose

among the unvaccinated inhabitants of Brittany. It spread among the French soldiers, and destroyed 23,000 of them. The Prussian army, which was frequently and extensively exposed, and was larger than the French, lost only about 250 persons by the disease. The Prussian army was thoroughly vaccinated, the French was not. In the whole Prussian army for twenty years, though often exposed, only four fatal cases of small-pox occurred among the revaccinated.

There are a few things which have to be borne in mind when arguing for vaccination :

1. Vaccination is protective only when the virus is good, and has entered and affected the system.

2. There is a very small number of persons who will take small-pox if exposed, whether they have been vaccinated or not. If vaccinated, however, most of these will have the disease less severely.

3. Vaccination protects in most cases only for a certain period of years, and revaccination is necessary.

4. Vaccine lymph may possibly deteriorate after passing through the human system many times. This deterioration of humanized lymph has probably taken place in England, and perhaps elsewhere in Europe.

5. Small-pox varies in malignancy with the epidemic. There is no evidence, however, to prove that small-pox is any less malignant now, on the whole, than it was eighty years ago.

The above facts have to be considered in passing judgment upon the so-called statistics of anti-vaccinationists.—*Medical Record*.

PRACTICE OF MEDICINE BY DRUGGISTS. — Under the care of the senior editor, lately, came a patient who had been for several weeks under treatment by a "respectable" druggist of San Francisco, on account of a real or supposed venereal affection. He had taken "eight dozen" mercurial pills, which the druggist had persisted in prescribing until a slight induration should disappear. Meanwhile, the general health of the man became more and more impaired, and finally an erythematous eruption covered the body, which induced the prescriber to shut off the

mercury. There is every reason to depend on the veracity of the informant in this case. Such cases are not rare. Indeed, they are so frequent as to have created a feeling on the part of the physicians against apothecaries which should not exist, and which is prejudicial to the interest of both. There should be some way of discriminating against druggists who perpetrate such frauds—for fraud it is, particularly in view of the law which imposes a heavy penalty on the practice of medicine without a license. We propose that every local and medical society keep a record, in which the names of all who are thus guilty shall be recorded—the members of the society to report every case of the kind coming under their notice. Perhaps a black list of this kind would deter some apothecaries from traveling in the “ways which are dark.”—*Pacific Med. and Surg. Journal*.

HOSPITALS.—The most frequent error made in regard to hospitals, is that these institutions are the creation of Christianity, and that to its beneficent functions solely has the infirmity and the disease of the world been indebted for such charitable relief. The most distinguished writers and speakers have, before the public, eulogized these noble institutions, and ascribed their creation and multiplication to the representatives of Christianity. Mr. Huxley refutes this popular and wide-spread fallacy, and ascribes the first existence of hospitals to the very morning of medicine; to the days of *Æsculapius*, and the *Æsclepiades*.

Mr. Huxley does not hesitate to attribute to this remote era the first creation of the hospital, and he gives such proof that no one can doubt his accuracy or fidelity. It is remarkable, however, that this great teacher did not go still farther back into the dawn of history, and show that, centuries before the Christian era, hospitals existed in India and in Egypt.—*Gaillard's Med. Journal*.

SANITARY SCIENCE JUSTIFIED BY ITS WORKS.—Those State legislatures and town governments which have not yet established boards of health, those which may be hesitating as to whether such notions pay, and certainly those politicians who may have persuaded themselves that a curtailment of the efficiency of such

organizations already established, under the excuse of a little pretended economy, will in the long run be approved by the people at large; all such would do well to devote some study to the recent report of the Local Government Board, which contains, among other things, a statement of the progress of sanitary work in England and Wales. It may be useful to draw attention to the annual death-rate for some years past, as indicating the effect which recent sanitary measures would appear to have had upon the public health.

ENGLAND AND WALES.

Annual death-rate per 1,000.	1841-50.	1851-60.	1861-70.	1871-80
All causes.....	22.4	22.2	22.5	21.5
Seven zymotic diseases.....		4.11	4.14	3.36
Fever.....		0.91	0.88	0.49

From the above figures it will be seen that, speaking generally, the death-rate of the country remained stationary from 1840 to 1870, but that in the period 1871-80 it fell from 22.5 (of the previous decade) to 21.5, a reduction equivalent to nearly four and one-half per cent. It may, therefore, be roughly estimated that about a quarter of a million of persons were saved from death in the ten years, 1871-80, who would have died if the death-rate had been the same as in the previous thirty years.

Comparing, then, 1861-70 with 1871-80, it will be seen from the foregoing figures, that of the entire reduction of 1.0 in the death-rate, more than three-quarters ($4.14 - 3.36 = 0.78$) comes under the head of "the seven zymotic (infectious) diseases;" of the diseases, that is, which are most influenced by sanitary improvements, and most amenable to control by the action of sanitary authorities.

The pecuniary gain may be thus stated: Under the inquiry as to interments, the cost of funerals—all round—was ascertained to be £5 each. The gain under that head will, therefore, be about one million by the quarter of a million of funerals saved during the last decade. The direct cost of sickness has been estimated at about £1 per case. The gain under that head during the decade will, therefore, amount to about three millions; a gain, that is to say, of medical treatment and other

expenses. But the gain to the wage classes, from the saving of lost labor, will have been far greater, or upwards of thirteen millions per annum. Sanitary science, as exhibited in this statement of the Local Government Board, which is merely typical of work actually doing and work that may be done in many other parts of the world, is certainly justified of her children.—*Boston Med. and Surg. Journal.*

THE IMMEDIATE ARREST OF BLEEDING FROM THE NOSE.—John Kent Spender, M.D., in *British Medical Journal* says: An improved instrument is described in Mr. W. Spencer Watson's book on Diseases of the Nose and its accessory Cavities. It "consists of a gum elastic tube about five inches long, with lateral perforations near the end, and covered with thin caoutchouc membrane in the form of a spirally twisted bag for the last three or four inches of its length. To use it the membranous bag is smoothly folded over the continued tube, and the whole being oiled (diluted glycerin is better) is passed along the floor of the nares till it reaches the pharynx. The bag is now inflated * * * and if a stop-cock is fitted the air is kept in by turning it as soon as sufficient tension is obtained." The cavity of the twisted bag could be injected with water if it were desired, but I have never found this necessary. When I recollect what "bleeding from the nose" was in old days, I can not be too thankful to Dr. Rose for his simple and effective invention. To be called to an obstinate accident of this kind, especially when other medical men had failed, was enough to make one sick at heart from the possibility of adding another failure to the dreary history; and then there was the consciousness that delay might mean impaired health or even death to the victim. The victory is half won when a man is armed with an apparatus which he knows is sure to succeed; and I am now speaking of cases in which he wishes to succeed, and which are not forms of natural blood-letting to be encouraged. The object of this brief communication is to recommend Dr. Rose's instrument for (1) facility of introduction; (2) the extent and evenness of the inflated area; and (3) the possibility of its remaining *in situ* for thirty-six or forty-eight hours, when it may be gently removed, and the hæmorrhagic nostril can be syringed with some cold astringent fluid for purposes of cleanliness and the washing away of blood *débris*.

Selections.

REMARKS ON THE TREATMENT OF CARIES OF THE SPINE IN CHILDHOOD, ESPECIALLY IN REFERENCE TO SAYRE'S PLASTER JACKET. By HOWARD MARSH, F.R.C.S., Assistant-Surgeon and Demonstrator of Orthopædic Surgery at St. Bartholomew's Hospital; Surgeon to the Hospital for Sick Children.

Two different methods are in vogue for the treatment of caries of the spine. The one confines the patient to the horizontal posture, with the object of relieving the column of weight, and of preventing muscular action. The other consists in the use of some apparatus with which the patient is allowed to go about as usual. The most recent development of the latter method is found in Dr. Sayre's plaster-of-Paris jacket and jury-mast. As these inventions have now been before the profession for some years, the time seems to have come for looking into the whole question, and for asking what are the principles on which such an affection as caries of the spine should be treated; what are the difficulties arising out of the conditions under which these principles have to be applied in different forms of the disease; and what is the absolute, and what the relative value of the means at our disposal for carrying them into effect.

In trying to ascertain what these main principles are, we may, I think, very properly turn to the case of inflammation of the joints in childhood. The nature of the disease is very similar in the two instances; and the functions of the spine, in bearing and transmitting weight, and in taking part in the various movements of the body, closely correspond with the functions of the large joints; of which the knee may be taken as a convenient example.

It is agreed that when the knee-joint is inflamed, it must be kept at rest; and, that rest may be secured, not only is the joint enclosed in some firm apparatus, but the patient is not allowed to bear any weight upon the limb. Either the parents are directed to have the limb maintained in the horizontal posture, or the patient is supplied with an instrument the professed purpose of which is to transmit the weight of the body to the ground, while the affected part is allowed to hang in a perfectly passive condition, with its functions as completely suspended as are those of a healthy joint during sleep. I say nothing of the efficacy of these instruments; this varies in different examples. I allude only to the fact that they are intended to place the joint at complete rest. How does the matter stand in the case of the spine? When a patient with spinal caries is supplied with a Sayre's jacket, and allowed to go about, how are the functions of the column performed? how is the weight above the seat of the disease supported, and transmitted to the pelvic arch, and how are the acts of walking, stooping, rising, lifting objects, etc., carried on? Either the patient is using his spine, or he is using his instrument instead of his spine. If he be using his spine, then the question arises, how is it that a patient may use a diseased spine, though he may not use a diseased knee-joint? while, if it be maintained that he is using his jacket instead of his spine—that the jacket becomes vicariously a part of the skeleton, and replaces the spine in respect to the bearing of weights and the execution of the various movements of the body—the proposition is one which seems to deserve close examination.

First, I will discuss the proposition, that the action of the jacket is to remove the superincumbent weight from the spine at the point of disease; or, what is the same thing, that it supports the weight of all the parts above the level at which caries exists. Let us suppose that the disease is in the sixth dorsal vertebræ, and, in order to simplify the question as far as possible, let us suppose that the patient is standing still. When the body of the sixth dorsal vertebræ is in process of destruction, the fifth tends to descend towards the seventh, with the result that the column bends forward, and that the parts within the angle are compressed. It is, therefore, required of the jacket that it shall take the

weight of the upper part of the column off the lower part, and transmit it by a collateral route to the pelvic arch. If this is to be done, two conditions appear to be essential: 1. There must be an efficient basis on which the jacket may rest; 2. The jacket must have a secure hold on the part of the column which it is required to sustain. Let us first examine the base. In young adult females in whom the pelvis is broad, and much greater in circumference than the thorax, and in whom the waist is small, the jacket rests on the expanded iliac crests, and the adjacent shelving bony framework of the hips, and the basis of support is fairly ample. In adult males, however, the pelvis is much less expanded, and in circumference is often less than that of the thorax; while in children under seven (very frequent subjects of caries), while the circumference of the pelvis measures, say, twenty inches, that of the thorax is often from twenty-one to twenty-four inches. Thus, while the thorax and pelvis in young adult females form a cone with the base directed downward, in males, and quite as markedly in children, these parts form a cone the wide part of which is above. How, then, can the pelvis afford the jacket an efficient base on which to rest, while it transmits the weight of all the parts appended to the upper part of the spinal column? But more than this. In estimating the efficiency of the basis of support afforded by the pelvis, it must be remembered that the tendency of the column is to fall forward, and that therefore it is required that the purchase should be especially firm in front. In front, however, there is no bony point except the symphysis pubis. But this lies too far back, and it presents no horizontal surface looking upward on which the lower edge of the jacket can rest. Indeed, I believe no one supposes that the symphysis does, as a matter of fact, afford any support. Yet, besides the symphysis, there is nothing but the muscular wall of the abdomen, with intestines behind it—structures which, in respect to their capability of giving support to an instrument, may fairly be compared to a more or less tightly filled air-cushion. They yield and recede as soon as the pressure tells upon them. It is, I know, held by some surgeons that the purchase anteriorly is not on the abdominal wall, but on the anterior superior spines and the iliac crests. But can we concede that this is really the

case? In children, these parts are so little salient, and are, so to say, so embedded in the abdominal wall, that the jacket cannot "clip" them. Even if they could be made to serve as points of support, would the skin over them bear the pressure representing the weight of the parts above the curvature? If they were thus used, should we not meet with pressure-sores over them? Though there is a great liability to pressure-sores over the spinous processes of the vertebræ, I have very rarely indeed met with them over the anterior superior spines or the crests of the ilia. Indeed, I believe these points, as a matter of fact—even when the jacket is pinched in above them, so that it has, what a child under seven has not, something approaching to a waist—afford but very slight support. This is evidently the view of Dr. Sayre, who says, at page 17 of his work, that "a detail of practical value is the application over each anterior superior spine of two or three thicknesses of folded cloth three or four inches in length. If these little pads be removed just before the plaster has completely set, such bony processes will be left free from pressure."

Thus, one of the great difficulties in the problem is, that no thoroughly efficient base for the support of the weight which the jacket is required to transmit can be obtained. But, next to a firm base to rest upon, the jacket should have a secure hold on the part of the thorax which it is called upon to support. It has been asserted that the jacket fits so closely, that it molds itself to the alternate ridges and hollows formed by the ribs and the intercostal space, and thus securely grasps the chest; and Dr. Sayre says that it is to be applied so that the ribs are held still, and so that the breathing is rendered diaphragmatic and abdominal. And, he adds, when the thorax is thus firmly secured, the anus and perinæum will rise and fall synchronously with the diaphragm, and the respiration be carried on without difficulty so long as these parts are free from pressure. "It is necessary, in some cases, that the patient should sit upon a chair, with a hole in the seat, like a close-stool, or use an inflated India-rubber ring, like the ordinary life-supporter" (p. 12).

But, surely, here is an instance in which theory and a fervid imagination have overleaped the bounds of what is either advisable, or even possible, in practice. We stand aghast when we are told

that the thorax, during the period of its most rapid growth and development, is to be so tightly constricted that its movements in respiration are entirely arrested. And can we believe that the skin thus firmly compressed—so firmly that no sliding can take place between the bony framework of the thorax and the jacket—would remain free from severe injury? But, if we turn to what is observed in actual practice—nay, even if we follow the instructions which Dr. Sayre himself has elsewhere given us (p. 18), when he tells us that “the bandage should be placed smoothly round the body, and must not be drawn tight”—we cannot maintain that the jacket fits so compactly as we are told it ought to do. On the contrary, I have always found that the finger can be easily passed down between the jacket and the surface of the chest. In considering the importance of the hold which the jacket should have on the thorax, in order that it may remove weight from the point of curvature, we must remember that the work must be done, so to speak, on a fine scale. We cannot safely separate the diseased surfaces so as to establish any considerable interval between them. It is rather a question of moderating the mutual pressure of the opposed surfaces than of completely separating them; so that if our support is to be adequate, it must act within the tenth of an inch; in other words, if it yield by so much as the tenth of an inch, pressure at the seat of disease returns, and the instrument loses its effect. And the difficulty of maintaining this slight amount of separation is increased by the structure of the spine itself. If the portion above and that below the disease were two solid rods, any extension we applied would tend to separate their adjacent ends—that is, to diminish their mutual pressure; but in the spine, formed as it is of blocks, with elastic intervertebral discs, the extension used is to a great degree lost in the general mobility of the column, and cannot be made with any amount of precision to act on the point at which the disease is situated.

Thus, when we see that the amount to which we can safely separate the two segments of the spine which meet at the point of disease is not more than about the tenth of an inch; that the extending force must be conveyed through a column permitting, in its whole length, considerable mobility; that the apparatus

we employ is a case so as to surround the spine itself, but the whole thorax and abdomen; that there is no adequate base from which the case can take its purchase; that, in fact, this base is usually no larger, and often much smaller, than the part for which support is required; that, in order that the functions of respiration may be carried on, the case must be sufficiently loose to allow the thorax some play beneath it,—I cannot but see the doubt that arises whether the jacket is competent to carry out the principles upon which it is supposed to act. Thus far, however, I have supposed the child to be standing still, and have discussed the action of the jacket without reference to muscular action. This part of the question, however, calls for some remark. During muscular action, the spine works, both as a whole and in all its parts, by leverage. Thus, for example, when the dorsal is extended upon the lumbar spine, it forms a lever; the lumbar spine serving as its fulcrum, while the erector spinæ is the power. Whenever a lever acts, it is pressed against its fulcrum. Therefore every movement of one part of the spine on another is attended with intervertebral pressure. Now, when a patient with spinal caries is fitted with a jacket and allowed to go about, what happens when he moves his spine—when he rises from the stooping to the upright position? If it were possible to detach the muscles at their insertion into the spine, and fix them to the jacket, the spine might remain passive, and be carried up in the apparatus; but, as it is, the spine, with the parts appended to it, is raised by muscular action, precisely as it is in health, and with the same amount of intervertebral pressure. It is the jacket, and not the spine, that is passive. The only effect of the jacket is to add to the weight which the spine is called upon to raise. Thus I do not see how it can be held that the spine is at rest, and that intervertebral pressure is prevented during muscular action by the use of the jacket; or how the condition of the spine differs from that of a diseased knee-joint, in which every muscular contraction is attended with inter-articular pressure.

In reply to the foregoing remarks, however, it may be objected that, after all, the value of a given method must be determined not so much by any *a priori* considerations as by the results

which it yields in actual practice. This is true. I will, therefore, turn to this branch of the subject. In the out-patient room at the Children's Hospital, and more recently in the orthopaedic department of St. Bartholomew's Hospital, I have applied the jacket to a large number of patients between the ages of one and eight or ten years, and have seen it very largely used by others. In many instances of disease in the dorsal region, the patients, while wearing the jacket, have complained of no pain (but this has seemed to prove nothing, for children often do not complain though they are entirely without apparatus), and their general health has remained good; but the deformity has, in the majority of the cases, steadily though slowly increased. Here and there I have met with cases in which recovery, with more or less deformity, has ensued; but the result has been limited, I believe, mainly to instances in which the disease after a time shows a tendency to undergo spontaneous repair, brought about, perhaps, by ankylosis between the articular processes, laminae, and neighboring parts of the column, which, by arresting further caving-in, has relieved the bodies from pressure. In disease of the lumbar spine, also, I have on many occasions seen the deformity steadily increase, and at last a large iliac abscess form; but I cannot say I have ever seen any instance in which, even when the jacket was applied in the early stage, the arrest of the disease, and finally its cure, could be attributed to this method of treatment. In watching these cases, it has always seemed doubtful whether the jacket, instead of supporting the parts above the disease—which, let it be noted, include all the trunk and the head and upper extremities—does not simply add to the weight which the diseased column already has to bear.

As to the jury-mast for the treatment of disease in the upper part of the spine, I have not myself succeeded in rendering it useful; and, in cases under the care of other surgeons, its action has appeared clearly defective. In the cervical, as in the other regions of the spine, the scale of extension is graduated to a fraction of an inch; and an efficient action of the suspending straps is counteracted by the alteration of their tension, which results whenever the position of the head is changed. There is the same difficulty in keeping the straps tight as that which is

met with in the perineal band, and which has led many surgeons to discard its use. Wherever I have examined a case in which the jury-mast was in use, I have, I believe I may say, invariably found that, after a few hours, the straps have become so loose as to produce no extension.

In venturing on an estimate of the value of the jacket, I do not forget that children are sometimes much relieved by its application. This fact must not, however, be allowed too much weight. A number of instances might be cited in which, though a method of treatment is acknowledged to be inefficient, it will yet to some extent control pain and other symptoms. The jacket often gives relief, not because it so completely removes intervertebral pressure and keeps the spine at rest that the disease is placed under the most favorable conditions for repair, but because it steadies the spine, and restrains both sudden and extensive movements either forward or laterally. The effect of the jacket is often seen when, in caries affecting one or more of the upper dorsal vertebræ is applied to the trunk below the disease, but does not extend above this level. Here, obviously, it can have no direct influence in supporting the part of the spine above the caries, and yet it nevertheless affords the patient considerable relief.

Having formed these views respecting the jacket, I am left to the conclusion that the best method at present known for the treatment of spinal caries is that by complete recumbency. This plan, if carefully carried out for the necessary time—extending, it may be freely allowed, from six to eighteen months, or even longer—will generally effect a cure; and it will also prevent the occurrence or increase of deformity. It is now well known that the means are at our disposal by which the distressing deformity that used to result in the course of hip-disease can be prevented, so that the patient recovers with a straight though it may be a shortened limb; and the lamentable distortions which now commonly ensue in the course of spinal caries can assuredly be prevented by the recumbent treatment, if it be applied in the early stages of the disease. I know it is objected that this method interferes with the general health, leads to bed-sores, and is very tedious. It is tedious no doubt; but this is a feature inherent in

the nature of the disease, which, in this respect, resembles caries of the tarsus, disease of the joints in childhood, and gland-enlargements, slowly tending towards suppuration. As to bed-sores, they are never met with in children who are fairly well attended to, however long they may be kept recumbent, except in cases of extreme exhaustion and wasting. In ordinary instances of spinal disease, they may be avoided by the use of moderate care and the maintenance of cleanliness. And, as to the failure of the general health from mere confinement to the recumbent posture, this has assuredly been very greatly exaggerated. I have seen numerous instances in which children have remained robust and fat, even though they have been recumbent for as long as two or even three years. The causes of wasting and failing health are usually either pain or prolonged suppuration; and both these may be generally avoided if the recumbent treatment is adopted early and carried out thoroughly.

I believe it is very advisable to combine the use of some firm apparatus with the maintenance of recumbency. For this, the plaster jacket may sometimes be usefully employed, though the poroplastic felt cases invented by Mr. Cocking, of Plymouth, are, I think, decidedly preferable. These cases are very readily applied; they can be easily removed and remolded; they are very light, durable, comfortable, and by no means expensive. I have used them very largely for patients at the hospital, and have found them very satisfactory, both for acute disease during the period of recumbency, and also in the convalescent stage of the affection, when the patients are allowed to move about.

A REPORT OF TWENTY CASES OF INJURY TO THE HEAD, WITH
REMARKS. By JOHN C. SCHAPPS, M.D., of Brooklyn, N. Y.

Nothing is more characteristic of injuries to the head, as compared with those to other parts of the body, than the marked individuality usually presented. This lack of common features, while it imparts to each case a particular interest, also renders the deduction of general results from a number of them, as a

basis of treatment for future ones, a matter of much uncertainty and difficulty. On the other hand, the study of a number of cases, guided by the peculiar features and the accumulation thus of a store of individual points, is to make the best use of the material at command. Every addition to this store is worthy of consideration.

The following cases, with the exception of the last, which occurred in private practice, were treated in St. Vincent's Hospital, New York, during the writer's residence as house surgeon. The report is made from notes taken at the time by Drs. W. H. Owens and J. F. Luby. The first fourteen were admitted during the service of Dr. Charles Phelps, and the succeeding five during that of Professor J. L. Little, as attending surgeons, through whose courtesy they are published.

Case 1. Compound fracture of vault of skull, and incised wounds of scalp; operation; recovery.—T. M., ice-man, æt. 28, was admitted April 7, 1880, having been struck several times on the head with an ice-axe. He was weak from hæmorrhage, but presented no evidence of intracranial lesion. There were three large incised wounds of the scalp. In one, two and one-half inches above the right ear, a raised edge of bone was discovered. This was movable, and was found to be a chip of the external table, one inch by one-half inch. Treatment: The fragment was removed and the bottom of the fissure sought by means of trephine and gouge. It was found not to penetrate the entire thickness of the skull. This wound was dressed with carbolized oil, and the others closed with sutures. An ice-bag was applied continuously for twenty-three days, in connection with the use of bromide of potassium, light diet, and laxatives when necessary. May 22, forty-five days after injury, he was discharged, cured.

Case 2. Extensive fracture of vault, and probable fracture of base of skull; operation; recovery; sequelæ.—A. M., boy, æt. 5, was admitted April 7, 1880, his mother, while carrying him, having fallen down stairs. He was in a state of coma, and suffering from shock. There was a large scalp tumor on right side of the head, the right pupil was dilated and fixed, while the left was contracted, and there was hæmorrhage from the right ear. Patient breathed without stertor. Treatment: Exploratory

incision in scalp tumor revealed a fissure having its edges depressed, extending from near the vertex, downward into right temporal fossa, where it could not be followed. The rongeur was used to cut away the depressed edges. In this, as in a majority of cases, the use of the trephine was unnecessary, the removal of an edge of bone and subsequent application of the elevator accomplishing the result sought. The dura mater was exposed for a space of two and one-half by three-quarter inches, and proved to be uninjured. The edges of the bone were carefully smoothed, the wound dressed with carbolized gauze and carbolic acid, and an ice-bag applied. Stimulants were administered hypodermically, and later by the mouth, 3j every hour. The patient gradually rallied. For several weeks the right pupil continued dilated, and marked right hemiplegia—same side as injury was present. The administration of stimulants, iron and quinine, was necessary, bromide of potassium and the ice-bag being used to control cerebral activity. The wound granulated and healed without difficulty. There was present at any time only moderate fever. Discharged August 28, cured. Sequelæ: Shortly prior to discharge, the patient was noticed to have difficulty in expressing his thoughts, which was attributed to his youth. One month after leaving the hospital he had become remarkably weaker in intellect, the right pupil remained slightly dilated, and the hemiplegia had disappeared.

Case 3. Fracture of vault and base of skull; operation; death; autopsy.—A. C., male, æt. 27, was admitted April 10, 1880, having fallen thirty feet, striking his head upon a ship's deck. He was in a state of profound coma, having stertor, dilatation of right pupil, hæmorrhage from right ear and both nostrils, ecchymosis surrounding both eyes, and a large scalp tumor upon right side. He had had a marked convulsion prior to admission. Treatment: An exploratory incision revealed a fracture of frontal bones surrounding depressed fragments. The fissure extended into temporal fossa. The trephine and rongeur were used to remove the depressed bone and rough edges for about two inches of the length of the fissure. The dura mater was found distended, and was punctured, when a large quantity of blood escaped. There appeared no injury to the brain. The wound

was dressed with carbolized oil. After the operation there was considerable twitching of both sides of body, especially the right, but no marked convulsion. Without recovering consciousness, on the following day the patient died. Autopsy showed a fissure extending from right frontal eminence into temporal fossa, and thence into the base. Both orbital plates and right middle fossa of the base were fractured. A large surface clot covered the right side of the brain.

Case 4. Contused wound of forehead; meningitis; death; autopsy.—C. M., boy, æt. 6, was admitted May 8, 1880, one week previously having been kicked in the forehead by a horse. He had suffered from headache, and for two or three days before admission had been lethargic. On admission he was semicomatose, with very feeble pulse, rigidity of muscles of neck and back, contracted pupils, and marked fever. On the left side of the forehead was a small contused wound, nearly healed, covering a circumscribed induration of periosteum. Treatment: Stimulants and ice-bag to head. Twenty-four hours after admission, patient died. Autopsy showed well-marked subacute meningitis, extending from immediately beneath point of injury as a center.

Case 5. Fracture of base and vault of skull, inferior maxilla and both radii; meningitis supervening after an interval of three weeks; death; autopsy.—H. B., errand boy, æt. 14, was admitted May 13, 1880, having fallen fifteen feet to the floor, striking upon his face and outstretched hands. He was suffering from shock, and lay motionless, without stertor, unless disturbed, when he manifested hyperæsthesia and active delirium. The left side of the face was contused, and ecchymosis surrounded both eyes. He had slight hæmorrhage from both nostrils, none from ears, and no subconjunctival hæmorrhage. There was no paralysis, but the delirium gradually became constant and violent, requiring restraint. A careful examination revealed no local evidence of fracture of the vault. Both radii were fractured three-quarters of an inch from the distal extremities, with the characteristic silver-fork^{ed} deformity. The inferior maxilla was fractured between the first and second left incisors. A fracture of the base was suspected from the above symptoms. Treatment: Bromide of potassium, ice-bag to head, cold applications to face, four-

tailed bandage for fractured jaw, and splints, not including the wrist joints for fractured radii. Within twenty-four hours the delirium disappeared. The patient was now rational, and had only slight headache. This disappeared on the succeeding day, and he was then entirely free from any symptoms of cerebral lesion, so that the diagnosis of the fracture of the base was now abandoned. On the third day after admission a small swelling, like a bruise, was observed at the upper edge of the left side of the forehead. An opening was made, and a careful search with the probe revealed nothing. The patient was now allowed to get up. His pulse, respiration and temperature were normal, his appetite good, his sleep natural, and the special senses undisturbed. About two weeks after admission, a small, hard point, like a shot under the skin, was discovered adherent to the bone over the right eye. It was painless, and supposed to be old. The patient continued to enjoy good general health and entire absence of cerebral symptoms until June 5, twenty-three days after the injury. At this time, without ascertainable cause, he had headache, followed by chill, nausea, vomiting and delirium. P. 92, R. 42, T. 102³/₀°. Diagnosis, acute meningitis. Treatment: Ice-bag, bromide of potassium in full doses and leeches behind ear. On the following day the above symptoms, especially the delirium, had markedly increased. The pupils became contracted, opisthotonos supervened. P. 120, R. 34, T. 105¹/₀°. On the next, the twenty-sixth after the injury, symptoms of compression occurred, and the patient died. Autopsy revealed extensive fracture of base and vault of skull. From the juncture of the sagittal and coronal sutures a fissure could be traced forward, in the median line to the base of the skull, thence through the cribriform plate of the ethmoid, to the left of the crista galli, and through the body of the sphenoid. About one and one-half inches above the root of the nose, a branch fissure was given off, which passed obliquely downward and to the left, to the outer side of the orbit, and thence through the orbital plate. This fracture was not discovered by the probe during life, because the opening had been made nearer the median line. The nodule noticed was found to be an exostosis upon the edge of this fissure, just above the frontal sinus. Both orbital plates

were fractured in many directions. Little or no effort at union appeared. The membranes were found engorged, thickened, and covered with flakes of purulent lymph. The meningitis had been general, and had apparently originated in the left anterior fossa of the base.

Case 6. Fracture of base of skull; large surface clot; death; autopsy.—G. R., butcher, æt. 40, was admitted June 4, 1880, having fallen a distance of thirty feet to the sidewalk. He was semi-comatose and delirious, with a rapid and feeble pulse, and slight stertor. The left side of the face was much contused, and over the left eye was a contused wound. Patient soon became profoundly comatose, with all the symptoms of cerebral compression, and died in three-quarters of an hour after admission. Autopsy disclosed fracture of left orbital plate, and large surface clot within the dura mater, on the right side.

Case 7. Depressed fracture of vault; operation; death; autopsy.—L. Z., female, æt. 17 months, was admitted June 6, 1880, having fallen about thirty feet to the ground. She was in a state of coma, approaching collapse, with dilatation of both pupils and stertor. A large scalp tumor occupied the left side of the head. Treatment: An exploratory incision was made, which revealed a depressed fracture, extending from the anterior fontanelle forward to the left frontal eminence, and backward along the sagittal suture to the posterior fontanelle. The edges of the frontal portions were much depressed. These were removed with the rongeur. Stimulants were administered. Patient subsequently showed less marked symptoms of compression, but did not rally, and in seven hours after admission died. Autopsy showed fracture, as above, and extending backward into occipital bone. The brain showed no lesion, and death had apparently been caused by shock.

Case 8. Compound fracture of vault of skull and laceration of eyeball; recovery.—D. G., housekeeper, æt. 40, was admitted June 14, 1880, having been struck in the face with a heavy iron vessel. Her general condition was good, and there was no evidence of injury to the contents of the skull. The left eyeball was lacerated, causing a total loss of function. A contused wound over this eye communicated with an undepressed fracture

into frontal sinus, and upward in the frontal bone. Treatment: Cold water dressing and rest in bed. July 17, thirty-three days after the injury, the wound had entirely closed, and the patient was discharged.

Case 9. Concussion of brain and fracture of inferior maxilla; continued cerebral symptoms; recovery.—M. P., expressman, æt. 30, was admitted June 17, 1880, having been kicked in the face by a horse. He was unconscious, but could be aroused. The pulse was feeble, pupils even and responding to light, the right being more sensitive. The right side of the face was much contused, and the inferior maxilla fractured upon the right side near the angle. Treatment: Quiet. On the following day, ice-bag and bromide of potassium. Patient did not recover his mental faculties, but continued in a state of semi-consciousness, with occasional low delirium, resembling the typhoid state. Constipation was marked, and difficult to overcome. It was finally suspected that the use of the ice-bag and bromide contributed to this condition of affairs. On July 9 these were suspended, with good effect. The delirium diminished, the patient gradually became rational, and on July 18, thirty days after the injury, was discharged, cured.

Case 10. Compound fracture of vault of skull; strumous cachexia; recovery.—J. R., shoemaker, æt. 52, was admitted June 18, 1880, having been struck on the head with a heavy drinking glass. He had angular curvature of the spine, with strumous cachexia, and very feeble constitution. Upon the face and scalp were a number of contused wounds, one, over left eye, leaping to an irregular, undepressed fracture of frontal bone, extending up to the frontal eminence. There were no symptoms of intracranial lesion. Treatment: Ice-bag, bromide of potassium and rest. Later, in consequence of the general bad condition, the administration of iron, quinia, and large amount of stimulants was found necessary. August 25 he was discharged, cured.

Case 11. Compound depressed fracture of vault of skull with laceration of membranes and brain; operation; hernia cerebri; death; autopsy. J. J., school-boy, æt. 10, was admitted June 18, 1880, having received a heavy blow with a cart-rung.

Although suffering somewhat from concussion, he was able to talk intelligently and had no symptoms of compression of the brain. Above and exterior to the left frontal eminence was a contused wound communicating with a depressed fracture of the skull. The patient was irritable and even violent when the wound was approached. Treatment: It was necessary to administer ether, as the patient was otherwise uncontrollable. The fracture was found to be saucer-shaped, one inch in diameter, having its center depressed about one-fourth of an inch. The sharp edge of a fragment had pierced the membranes and penetrated into the brain, making a wound one-half inch long. The fragments were removed and the rough edges cut away with the rongeur. Carbolyzed cold water dressing and an ice-bag were applied, and bromide of potassium (gr. v, ev. 2 hrs., varied p. r. n.) administered. P. 120, R. 32, T. 104°. In a few days the brain began to protrude through the opening in the membranes. The protruded mass gradually increased in size, sloughed, and was accompanied by high fever. Light compresses were applied with a view of controlling the hernia, but their application was followed by convulsions and the attempt was abandoned. Two weeks after the injury the mass had reached the size of a hen's egg, was very fetid, and was discharging large clots of disintegrated brain tissue. Up to this time the patient had retained perfect intelligence, but was exceedingly irritable. Tonics and small quantities of stimulants were administered. The protruded mass was supposed to contain an abscess, and punctures were made into it. These were found to be perfectly painless, however deep, while the surrounding membrane was acutely sensitive. Sixteen days after admission, twitching of the face and the right upper extremity were manifested. Two days later, one or two slight convulsions, more marked on the right side, occurred. Hæmorrhage from the mass now supervened and continued until July 7, nineteen days after the injury, when the patient died. Intelligence was retained until twenty-four hours before death. Autopsy: The body was much emaciated, and all the internal organs found to be very anæmic. The membranes were adherent to the brain all over the left hemisphere. This hemisphere was

almost entirely softened and disintegrated. The right hemisphere and the base appeared normal.

Case 12. Compound fracture of vault of skull; recovery.—M. M., laborer, æt. 28, was admitted June 24, 1880, having been struck on left side of head and face with a heavy carving knife. The wound communicated with an undepressed fissure extending backward from just behind the left mastoid process. He had no symptoms of intra-cranial lesion. Treatment: Cold water dressing was applied, bromide of potassium administered, with a cathartic when necessary. July 30—thirty-six days after injury, he was discharged cured.

Case 13. Compound fracture of vault and base of skull with laceration of brain; death; autopsy.—M. R., longshoreman, æt. 29, was admitted July 6, 1880. A heavy iron hook, swinging from a derrick, had torn its way through the anterior part of the skull. The patient was unconscious, and had dilatation of both pupils and a rapid and feeble pulse. He had had one convulsion before and one after admission. An irregular lacerated wound, about two inches in length, extended across the forehead and presented commingled fragments of bone and brain tissue. A triangular piece of bone an inch in diameter was deeply imbedded in the brain. There was considerable hæmorrhage from the longitudinal sinus. Treatment: The fragments of bone were removed with the fingers and forceps. Stimulants were given p. r. n. The patient did not rally, the hæmorrhage continued, considerable brain tissue came away, and on July 8, two days after the injury, the patient died. Autopsy: A little to the left of the median line of the frontal bone was an opening one by two inches. From the junction of the sagittal and coronal sutures, two fissures were found to extend; one in the median line along the edge of the above opening, thence into the base of the skull, passing through the ethmoid; the second obliquely forward and to the left to the base, where it passed into the orbital plate at its outer part. The left side of the frontal bone, thus included and containing the opening, was attached to the base by only a small portion, and was elevated about one-eighth inch. At the right parietal eminence was a depressed fracture, the inner table

being much splintered. The membranes and brain at the site of each fracture were extensively lacerated.

Case 14. Fracture of vault and base of skull and inferior maxilla; operation; hernia cerebri; death; autopsy.—W. S., driver, æt. 17, was admitted July 28, 1880. He had fallen thirty feet, striking his head upon a board floor. He was semi-conscious, and manifested active delirium when disturbed. Ecchymosis surrounding both eyes was so extensive that the pupils could not be seen. He had no stertor nor paralysis. The pulse was rapid and very feeble. Over left frontal eminence was a large scalp tumor. There was a profuse hæmorrhage from both nostrils and free escape of cerebro-spinal fluid from the left ear. The inferior maxilla was fractured between the first and second left incisors, and the right middle metacarpal bone was fractured. Treatment: Stimulants were administered hypodermically and by the mouth. On the following day the patient had rallied considerably. Ether was administered because of the excessive irritability, and an exploratory incision made into the scalp tumor. A comminuted, depressed fracture was found and several large fragments of bone removed. The rough edges were cut away with the rongeur, the use of the trephine being found unnecessary. The dura mater was found to be contused and distended. It was pierced but no blood escaped at the time. The wound was dressed with lint and carbolic acid, and an ice-bag was applied. Stimulants were ordered p. r. n., and bromide of potassium in full doses. The condition of the patient—semi-conscious, except when disturbed, then violently delirious—continued, with the addition of high fever; on the third day the temperature rising to 108°. The cerebro-spinal fluid continued to escape freely from the ear, and some oozing of dark blood with slight protrusion of brain occurred from the wound. On August 1, the fourth day after the injury, he died. Autopsy: A fissure was found extending from the opening at left frontal eminence across the median line to right supra-orbital foramen. A second was traced from left supra-orbital foramen backward across anterior and middle fossæ, and through the petrous portion of the temporal bone. The body of the sphenoid, and the cribriform plate of the ethmoid were fractured, and both orbital plates comminuted. The

membranes were adherent and thickened, and showed inflammatory changes. These were more marked near the opening, at which place the brain was disintegrated.

Case 15. Surface-clot and uræmia ; death ; autopsy.—M. P., housekeeper, æt. 48, was admitted August 9, 1880. About twenty-four hours previous, while supposed to be intoxicated, she had fallen and struck her head against a door. She had been unconscious since that time. No history of convulsions could be obtained. On admission the patient was in a state of profound coma. She had dilatation and immobility of right pupil, and a feeble pulse of 112. Over the left side of forehead was a large scalp tumor, and over right a contused wound. There were present œdema of extremities and albuminuria. Exploration of scalp tumor and wound revealed no fracture. Treatment: Mustard was applied over the kidneys, and elaterium and jaborandi administered. In eighteen hours after admission patient died. Autopsy: A large clot was found on right side between dura mater and skull. There were signs of an old meningitis. The abdomen was not examined.

Case 16. Fracture of vault and base of skull ; surface-clot ; death ; autopsy.—G. M., boy, æt. 4, was admitted August 26, 1880, having fallen about fifteen feet to the flagging, striking upon his head. He was in a state of profound coma, with cold extremities and feeble pulse. There were present dilatation and immobility of the left pupil, hæmorrhage from the left ear, and sero-sanguinolent discharge from the right. Ecchymosis surrounded the right eye. A large scalp tumor, through which a fracture could be felt, occupied the left side of the head. Treatment: Warm applications to extremities. Patient died in two hours after admission. Autopsy: A fissure about six inches in length was found extending from the left temporal fossa backward and inward to a point three inches above occipital protuberance. The middle fossa of the base on the right side was fractured. A large surface-clot was found within the arachnoid upon the left side.

Case 17. Fracture of vault and base of skull ; surface-clot ; death ; autopsy.—C. C., laborer, æt. 40, was admitted September 16, 1880. No history of the manner of his injury was obtain-

able. He was in a state of coma, had a slow, full pulse, and stertorous respiration. The left pupil was contracted, the right dilated. He had marked twitching of right side of the body. Over left eye and behind right ear were contused wounds, while the left eye was ecchymosed. Treatment: Ice-bag was applied and perfect quiet maintained. Carbolyzed dressings were applied to the wounds. On the following day the patient manifested evidences of returning consciousness, but died on the second day after admission. Autopsy: A fracture was found extending from one and one-half inches above right mastoid process downward and backward nearly to the foramen magnum; also a second through right greater wing of the sphenoid. A surface-clot within the arachnoid was found upon the anterior portion of each hemisphere, that upon the right being the larger.

Case 18. Fracture of base of skull; surface-clot; death; autopsy.—E. S., housekeeper, æt. 40, was admitted September 18, 1880, having fallen forty feet upon her head. She was unconscious, the pulse was slow and feeble, both pupils were dilated and fixed, and there were present slight stertor and hæmorrhage from the mouth. External to the right frontal eminence was a large scalp tumor. There was no hæmorrhage from the ear. Patient died in twenty minutes after admission. Autopsy: A fracture was found on the right side of the base, extending from the middle fossa through the petrous portion of the temporal bone into posterior fossa; also a short fissure into the foramen magnum, and one through sella turcica. A large clot within the arachnoid occupied the right side.

Case 19. Fracture of vault of skull, and laceration of base of brain; surface clot; death; autopsy.—P. O., laborer, æt. 40, was admitted September 20, 1880. A brick had fallen upon his head from a height of forty feet. He was conscious, but slightly incoherent and irritable. He then had severe headache, but no other evidence of intra-cranial lesion. To the right of the vertex was a contused wound communicating with an undepressed fissure. Shortly after admission patient became violently delirious, requiring restraint. Treatment: Sulphate of morphia gr. 1-6, hypodermically. The wound was dressed with borated cotton and carbolic acid, an ice-bag applied, and bromide of potassium ad-

ministered. The patient soon became more quiet. The left pupil was observed to become markedly dilated, the right remaining normal. A few hours later the left had become contracted. Four or five hours after admission the patient had become lethargic, but was violent upon being disturbed. On the following day well marked symptoms of cerebral compression, stertor, slow and full pulse, coma and dilatation of the left pupil supervened. On the second day after the injury these symptoms continued, the temperature rose to $105\ 2.5^{\circ}$, and the patient died. Autopsy: The fissure extended from the vertex downward, forward and to the right, to the center of middle fossa on the right side of the base. At this point the base of the brain was slightly lacerated, and presented evidence of local inflammation. A clot of blood, six by four inches, external to the dura mater, had caused marked flattening of the convex surface of the left side of the brain.

Case 20. Compound fracture of vault; recovery; sequelæ.—J. R., glassworker, æt. 14, was first seen November 5, 1880. Three days previous he had received a blow on the head from a brick. He became immediately unconscious, but in a short time was able to walk to his home. On the second day after the injury he had severe headache and symptoms of constitutional disturbance. On the following day, when first seen, he had had two well marked convulsions. When six years old the patient had fallen upon the back of his head. This was succeeded by occasional convulsions for six months, since which time he has had none up to the present. Upon examination he was found to have severe pain in the head at the point of injury, hebetude and intolerance of light and sound. The pupils were slightly contracted, equal and responded to light. The pulse was 112, temperature $102\ 2.5^{\circ}$. The bowels were constipated. A contused wound of the scalp was found just anterior and internal to the right parietal eminence, at the bottom of which was the juncture of three fissures of the skull. One extended downward and forward, one downward and backward, and the third inward and slightly forward. The periosteum had been removed for a small space. Treatment: The wound having been enlarged, a difference of level of half the thickness of the bone was found between the edges of the fissures. Elevation was urged, but under

advice was not attempted. The wound was dressed with cold water and an ice-bag applied. Perfect quiet in darkened room, with liquid, unstimulating diet, bromide of potassium, gr. x, every two hours, and a saline cathartic were ordered. The convulsions did not recur; two days later the temperature and pulse became normal, and only occasional slight headache occurred. The bromide, in gradually reduced amount, and the ice-bag were continued for nearly six weeks. The patient was then allowed to get up. On December 22, nearly seven weeks after the injury, a piece of dead bone three-quarters by one-eighth of an inch was removed, and the wound healed without difficulty. Sequelæ: About two months later patient began to experience severe general headache, and became very susceptible to noise, and irritable. He was anæmic. Treatment: Syrup of the iodide of iron, gtt. xv, three times a day, and avoidance of exciting causes. A month later the symptoms had not perceptibly abated.

Some points of interest may be found in each of the foregoing cases. It is evident that these are, individually, of more practical importance than any deductions and inferences to be drawn from tabulating them as a whole. This would be equally true were the series many times as large. It would appear that the difference in plans of treatment advised by high authorities has had its origin in the ignoring of this very fact, and in deciding, in general, questions which can only be properly settled upon the merits of each particular case.

There is one measure, frequently neglected, which cannot be too strongly urged—namely, that all suspicious tumors of the scalp be incised, and the underlying skull carefully explored for a fracture. Should none exist, that fact is important. Should one be found, the proper treatment and probable result may then be intelligently considered. The addition of a clean scalp wound is a trifling consideration. The question of operation upon the skull frequently presents itself as a problem difficult of solution. The history of the case, the condition of the skull externally and the symptoms which denote its condition internally, may be considered the three factors which are distinct in each case, while the following well-known truths may represent the constant quantities in the solution of this problem:

1. Injuries to the head are serious not in proportion to the amount of damage suffered by the skull, but more nearly to that experienced by its contents.

2. The injury to the intra-cranial tissues may be produced by the same force, at the same time as that of the skull, as rupture of a vessel by the same force that causes a fracture.

3. The injury may be a consequence of that of the bone, as, primarily, laceration or compression of the membranes and brain by a fragment of bone; secondarily, by the intervention of inflammatory processes, as meningitis caused by an irritation from abnormal conditions of bone.

4. It may be partly concomitant with that of the bone, and partly caused by it, with or without the intervention of inflammatory action.

5. It may occur without any injury to the skull, as intra-cranial hæmorrhage or meningitis following a blow upon the head.

It is evident that any general plan of treatment must be based upon these constant factors alone, and therefore cannot be applied indiscriminately. But these factors furnish, however, some important conclusions. From the first of them follows, as a necessary consequence, an important consideration as to the gravity of operations upon the head.

For, as force is only dangerous in proportion as it is expended upon the contents of the skull, the careful removal of bone without infliction of injury upon these contents cannot be a very hazardous proceeding.

From the third and fourth it is equally evident that, since the abnormal condition of the bone is so great a factor in determining intra-cranial, and therefore, dangerous lesions, the importance of its removal can hardly be over-estimated. As an irritant, its action may be delayed, but the natural forces cannot remove it. The best they can do is to round it off and render it as innocent as may be, and this is only accomplished by the very process, so important to avoid—that of inflammation. With reference to waiting, in hope that subsequent events may prove operative measures unnecessary, there is this to be considered: That should any abnormal conditions threatening the contents of the skull exist, not only is the case compromised by a prolonged sub-

jection to the injury, but that any operative measure in proximity to inflamed meninges is quite different in its tendency from the same measure near parts in a healthy state. The possibility, further, of a recovery without operation, and subsequent difficulty from injured bone, as illustrated in cases 5 and 20, should not be ignored.

The question of resection of the skull, with or without the trephine, may, then, be called into consideration on account of the conditions of the bone itself, as above, or to relieve symptoms not caused by the bone, as to furnish an exit for blood or inflammatory products. Although too much emphasis cannot be laid upon the importance of avoiding generalities, and upon deciding each step upon the merits of the particular case under treatment, the conclusion seems a fair one that true conservatism is not that which waits to see what nature can do when hard pressed, but that which disregards the skull when its contents are to be considered, and which, when possible, removes a cause of harm before it has had time to effect any damage.

A proportion of cases where the propriety of operation is *sub judice* are those presenting a combination of injuries, as, for example, a fracture of vault and probable fracture of base. Where respect for record as an operator enters, that frequently decides the matter. But leaving this aside—as may be easily done in theory—it often becomes a choice of subtracting, or not, from the sum total of the patient's disabilities those possible to be removed. It would appear as though the fact of a case being considered "hopeless" would simplify the matter; for surely a hopeless case cannot be injured.

The only post-mortem results which indicate an operation upon the skull to have been improper, are those which show it to have been an active element in causing death which would not have been caused by the conditions calling for the operation. These results are rarely found.—*Annals of the N. Y. Surgical Society.*

CLINICAL LECTURE ON THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER BY BATHS, SPONGING THE BODY, AND THE WET SHEET, delivered at Bellevue Hospital, by AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in Bellevue Hospital Medical College, New York.

GENTLEMEN :—As introductory to the subject of this lecture, I ask to be indulged in giving some personal reminiscences. More than thirty years ago my interest was enlisted in the clinical study of the continued fevers. This was not long after the publication, in this country, of the translation by Bowditch of the great work of Louis, containing researches which established the clinical history of the typhoid fever in France, of that day, and not less of the typhoid fever of to-day in all countries. The observations by Gerhard, Shattuck, and others had recently been published, showing that typhus fever, as existing in Ireland, and as imported into this country, was a species of fever distinct from the typhoid fever studied by Louis. It was a mooted question at that time whether typhus and typhoid fever were varieties of one species of fever, or essentially different diseases. This question elicited much discussion at the annual meeting of the New York State Medical Society in 1850, and a committee was appointed, of which I was made chairman, to collect facts relating to the question. I was in this way led to study analytically, following the numerical method of Louis, all the cases of continued fever which, up to that time, I had recorded. The number of cases amounted to fifty-two. The results of the analytical study of those cases were embodied in a report. In 1851 I had collected the recorded histories of forty-eight additional cases of typhus and typhoid fever. I subjected these cases to an analytical study, and embodied the results in a second report. Again, in 1852, I studied in the same manner sixty-four cases of typhoid and typhus fever, which I had recorded since 1851, and the results were embodied in a third report. The whole number of cases analyzed thus were one hundred and sixty-four.

One advantage in studying these three collections of cases

separately was, the results obtained from the collections severally could be brought into comparison with each other. The three reports were published in a volume in 1852. I may be permitted to refer to this volume for several reasons. It was my first-born of a bibliographical brood, which has since become somewhat numerous. It is not in a condition now to speak much for itself, as it has long been out of print. The edition was small, and, moreover, the volume was printed for the author, having only a nominal publisher, so that it never had a fair chance for much circulation. But it represents the employment of most of my leisure hours for a period of three years. Aside from the personal benefit derived from the studies, compensation for the labor was found in a remarkable correspondence with the results of Louis' researches as regards the clinical history of typhoid fever—a correspondence corroborating the accuracy of his researches, and going to show that the disease retains its historical characteristics in different countries and at different periods. I began the analytical studies with belief in the identity of typhus and typhoid fevers, but the studies converted me to the opposite opinion, and this opinion is now held by most, if not all, medical writers. In collecting my histories, I stumbled upon a number of cases of relapsing fever, and these were the only cases of this disease which, up to that time, had been reported in this country, except some recorded by Clymer, in 1846.

My subject to-day is the treatment of cases of typhoid fever by the antipyretic employment of cold water. I may mention the fact that, in my second report, I studied the effects of the wet-pack in five cases. By the "wet-pack" I mean enveloping the body in a wet sheet, and over it dry blankets, after the method of the so-called hydropathists of that time. This measure cannot act by the direct abstraction of heat; but it is entitled to be called an "antipyretic measure," for it is often followed by a considerable reduction of temperature. As such, it deserves more consideration than it appears to have received. Within late years I have known it to prove signally useful in many cases of febrile disease. When my reports were written, the thermometer had not come into clinical use, the intensity of fever being estimated by the subjective symptoms together with the sensation of

heat communicated to the hand applied to the skin. The effect of the wet-pack, in my cases, was excellent; but I was deterred from continuing my observations by the occurrence of apoplectic coma in a case in which this measure had been employed with very marked immediate benefit. There was no ground for supposing that the treatment had anything to do with the occurrence of the coma; but, as a measure was then a novelty in medical practice, I considered that I would be held responsible for any accidents that might subsequently take place.

The following quotation from my second report expresses my ideas of the value of external refrigerating treatment at that time: "The direct effect of an increased disengagement of caloric, it is not improbable, may contribute to some of the evils of the febrile state. The most effective refrigerating measures, which possess much potency, are external applications, and these are *cold water* and *cool air*. Ablutions with cold water are usually grateful to the sensations of patients affected with fever, and abate, frequently in a striking manner, the increased heat and dryness. The simplicity of the measure causes it to be lightly esteemed by attendants, and sometimes, perhaps, by physicians. It is really an important part of the treatment of a large proportion of fever cases. The face, body and extremities may be sponged, in succession, several times a day, or as often as the heat and dryness of the surface return. A faithful, judicious nurse may occupy a considerable portion of the time with these ablutions to the advantage of the patient. Should cold water occasion uncomfortable sensations (which is rarely the case), tepid or even warm water will secure, by evaporation, part of the refrigerating effect. The evaporation will be more rapid if spirit be added to the water. Cologne, or other perfumed spirits, may be employed for this purpose. Cold water, taken into the stomach, exerts a refrigerating effect on the skin and the system at large. Patients should be allowed to drink freely. The refrigerating effect of cool air is important. This is one of the useful ends of free ventilation. To secure this end, the patient should be lightly covered, and ventilation between the bed-clothes attended to." These views, published thirty years ago, foreshadowed those which at this moment hold the most prominent place in the treatment of fever.

Since the commencement of the session (1881-82), we have treated in this hospital [Bellevue] several cases of typhoid fever. In all the cases, except some in which the temperature of the body did not rise above 103° F., the reliance has been mainly on antipyretic measures, together with those of palliation and support. Antipyretic measures have been for several years mainly relied upon in treating the cases of this disease which have been received in the medical division of the hospital with which I am connected. The number of cases treated antipyretically is not large, being only fifteen.* These cases, however, have been observed closely, and the histories recorded with much painstaking on the part of the members of the house-staff who have had the cases in charge. During the whole, or the greater part, of the course of the disease, the temperature and the pulse have been noted every hour or two of the twenty-four hours in most of the cases. I propose, in this lecture, to give the results of the analytical study of these cases. I shall not challenge your patience by reading the histories. To do this would be intolerably tedious. From the histories I shall select the facts bearing on the following points of inquiry: (1.) The different modes of employing, externally, cold water, and the general rules observed in their employment. (2.) The antipyretic effect obtained, the time required, the duration of the effect, and the repetitions of the different modes of employing cold water for the reduction of temperature. (3.) The mortality and the duration of the disease in these cases. (4.) The employment of quinia as an antipyretic remedy in these cases. (5.) The employment of alcoholics. (6.) The dietetic treatment and the medicinal remedies employed.

1. *The different modes of employing externally cold water, and the general rules observed in their employment.*—In a few cases the cold bath was employed, that is, the patients were placed in a bathing-tub, in water of a temperature of 80° F., and the temperature reduced by the introduction of ice to about 65° F. This mode may be called, for the sake of distinction, the ice bath. It was soon discontinued on account of the inconveniences attending it, and it was not resumed because the employment of

* It was subsequently ascertained that two additional cases had been overlooked.

other modes appeared to secure all its advantages. The other modes were the sponge bath and the wet sheet with sprinkling. The sponge bath was often found to be notably effective. To obtain the utmost efficiency of this mode, the whole body exposed to the air is sponged with cold water, and the sponging continued steadily for a considerable time. As will be seen presently, the temperature of the body may, in many instances, be satisfactorily reduced by this mode. The wet sheet, however, is more effective. In carrying out efficiently the latter, the body is wrapped in a wet sheet, and sprinkling with water from a watering-pot, repeated at intervals of a few moments. The patient need not be removed from the bed if it be protected by a sufficiently large India-rubber cloth, but the cot known as "Kibbe's cot" is to be preferred. An ordinary cot-bedstead answers, however, very well. This mode of refrigeration is vastly more convenient than the bath-tub; it can be better regulated as regards the degree of cold, the duration of its employment, etc.; it is less likely to prove hurtful, and it may be made equally efficient. In most of the cases the sponge bath and the wet sheet were employed at different times during the progress of the disease.

The general rule with regard to the employment of these modes was to resort to one of them whenever the axillary temperature exceeded 103° F., and to continue it until the temperature was reduced to at least 102° . The temperature during the continuance of the employment of cold is, of course, to be taken in either the mouth or the rectum. The symptoms, aside from the temperature, were noted, and if at any time the pulse became feeble, the respiration disturbed, or the lips livid, the measure was at once discontinued. Alcoholics were often given during the continuance of the sponging or of the wet sheet with sprinkling. It will be seen that the wet sheet, in many instances, was continued for many consecutive hours.

2. *The antipyretic effect obtained, the time required, the duration of the effect, and the repetitions of the different modes of employing cold water for the reduction of temperature.*—In order to present as succinctly as possible the facts pertaining to these points of inquiry, which are contained in the histories of the cases everally, I have arranged them in a tabular form, and they will

appear in a paper which I am preparing for publication in *The Medical News*.

I have found, on comparing these tables in respect of the number of repetitions of the employment of cold during the course of the disease, that they present notable differences. The number of ice baths given in all the cases was five, of sponge baths 129, and of the applications of the wet sheet 64; the total number being 207; the number of repetitions of the sponge bath in one case not having been fully noted. Excluding the four fatal cases, the lowest number in any case was three, the sponge bath having been employed once and the wet sheet twice in this case. In the case offering the next lowest number, four sponge baths were given; the highest number was 51, the ice bath having been employed five times and the sponge bath 46 times in this case. The next highest number was 18, this number of sponge baths having been employed. Now, the question arises, did the employment of cold in any of the cases have an agency in preventing permanently a rise of temperature, which would have occurred had cold not been employed? I think we may answer this question affirmatively; but much allowance is to be made for the differences to be observed in different cases of typhoid fever in the degree of fever-heat, irrespective of any treatment. Cases are not infrequent in which the temperature never rises above 103° . If, however, the temperature for a short time rises to 104° or 105° , and, after the employment of cold three or four times only, there is no further rise to 103° , it seems fair to attribute a certain amount of agency to the antipyretic treatment in preventing a subsequent degree of fever sufficient to call for a repetition of the treatment.

Notable differences in respect of the length of time required to produce an antipyretic effect are to be observed. The effect was produced by the ice bath in 30 minutes, by the wet sheet in 25 minutes, and by the sponge bath in 20 minutes. These were the shortest periods required; the longest were 20, 11, and 10 hours. Between these extremes, the length of time in the different cases varied much. This was true not alone in different cases, but at different times in the same case. It is evident that there are no known laws regulating the length of time required to produce an antipyretic effect. No judgment can be formed beforehand as

regards this point; it can only be determined by experimental observation, and the result of the antipyretic treatment on one day is not to be relied upon in judging of the probable effect on other days during the course of the disease.

The statements just made respecting the length of time required to produce an antipyretic effect by the employment of cold, apply still more strongly to the production of this effect. Looking over the figures in the column devoted to this heading, it is found that variations were great. For example, in one case the consecutive durations are ten days, one hour, 48 hours, and 24 hours. In another case consecutive durations are two hours and a-half, 13, three, 20, and five hours. In another case, after consecutive durations of six, 15 and eight hours, the temperature before the last of these periods being 104° , there was no future rise to 103° . There is no approach to such a regularity in the successive periods during which the antipyretic effect continues as to point to any appreciable law. After the reduction of temperature has been effected, the previous experience, even in the same case, furnishes little ground for predicting the length of time during which the temperature will remain reduced. Nor is it practicable to judge beforehand, from either the duration of the antipyretic effect or its degree, of the amount of the rise of temperature which will take place. Nor, again, can any inference be drawn from the temperature which exists when cold is employed, whether or not hyperpyrexia will again occur.

In several instances a decline of temperature takes place after the discontinuance of the sponge bath or the wet sheet. The time during which the decline took place varied from 15 minutes to 15 hours. This fact was noted three times in one case, twice in two cases, and four times in one case. In one case the temperature was increased while the patient was in the wet sheet, reduction afterward taking place. So far as an inference is to be drawn from this collection of cases, it is not the rule, but the exception to the rule, for the temperature to decline after the discontinuance of either the sponge bath or the wet sheet.

It is not to be denied that the facts in these cases are not sufficient to test the relative value of the wet sheet and the sponge bath as contrasted with the ice bath. The latter was employe

only five times and in only two cases. In each instance the temperature was promptly reduced. But there were instances in which the wet sheet and the sponge bath proved equally effective. The facts contained in the tables show that by means of the sponge bath a satisfactory antipyretic effect may be often obtained. This being the simplest mode and most easily employed, it may be first tried, and, if it fail, the wet sheet substituted. These two modes, singly or successively employed, will, as I believe, render unnecessary the use of the bath-tub. The wet sheet may be made more or less efficient, according to circumstances, by sprinkling at longer or shorter intervals and by using water of different temperatures.

Finally, I would call attention to the fact that in no instance could any immediate harm be attributed to either of the three modes of the employment of cold. In no instance were there symptoms following their employment so closely as to indicate that the patient had suffered injury therefrom. As a rule, the reduction of temperature was accompanied by improvement in other symptoms. Patients sometimes complained of discomfort, but this probably arose from the reluctance to be disturbed rather than from any unpleasant effects attributable to the cold; oftener they expressed a sense of comfort during its employment.

The number of cases in this collection is not sufficient for testing the influence of the antipyretic measures of treatment on the fatality of typhoid fever. In this regard, however, they may be considered as having some value. Of the fifteen cases, death took place in four. Two cases of recovery, in which the same measures of treatment were employed, were overlooked prior to the completion of the analytical study of the fifteen cases. Adding the two additional cases, the fatality was four in seventeen cases. This fatality is not far from the average rate in collections of cases otherwise treated. So far as any deduction is warrantable, it may be said that the antipyretic measures neither increased nor diminished the fatality.

The duration of the disease in the cases ending in recovery was determinable with precision in nine cases. The shortest duration was nine and the longest twenty-seven days. The mean duration was seventeen and a half days. The latter is one day

and a half longer than the mean duration in forty-two cases analyzed by me thirty years ago. The commencement of the disease in the cases now and in those formerly analyzed was dated from the time of taking to the bed. In the cases now analyzed the fever was considered as having ended when the temperature had fallen to within the normal range, that is, from 98° to 99° .

It cannot be said that the mean duration in the cases now analyzed is evidence that the disease was shortened in its course by the antipyretic measures of treatment.

In the four fatal cases the shortest duration was fourteen and the longest thirty-four days. The mean duration was twenty-one and a quarter days. Post-mortem examinations were made in three of the four cases. In none of the three cases were grave complications found after death. Death took place in all by asthenia. In no case was there any ground for the belief that the antipyretic measures of treatment had any agency in the fatal termination.

3. *The use of Quinia as an Antipyretic Remedy.*—The sulphate of quinia was given in several instances, as an antipyretic remedy, in conjunction with the employment of cold. The instances are noted in the tables. How much effect may have been produced by the quinia in these instances cannot be determined with accuracy. Inasmuch, however, as the reduction of heat effected by the two was not greater or more rapid than often by cold alone, it is fair to conclude that the agency of the quinia was not great. In a few instances quinia was given for an antipyretic effect without being conjoined with cold. In one of these instances the temperature fell in eight hours from $103\frac{1}{4}^{\circ}$ to 102° after 30 grains of the sulphate of quinia. In another instance 20 grains were given, and two hours afterward 25 grains. In two hours after the last dose the temperature had fallen from 105° to $103\frac{1}{4}^{\circ}$. In another instance 15 grains of the sulphate of quinia were given, the temperature being 104° . In five hours the temperature fell to $103\frac{3}{4}^{\circ}$. Ten grains more were given, and in two hours the temperature was 102° . Ten grains more were given, and in two hours the temperature was $102\frac{1}{4}^{\circ}$. A fourth dose of 10 grains was then given, and in four hours the temperature was $100\frac{1}{2}^{\circ}$. Ten grains three times were given on the fol-

lowing day, the temperature ranging from $100\frac{1}{2}^{\circ}$ to 99° . These doses were continued during the next day, and the temperature rose to 102° . The patient was much cinchonized, and the remedy was discontinued. In another instance 20 grains of the sulphate of quinia were given, the temperature being $102\frac{1}{4}^{\circ}$. In three hours the temperature had risen to 104° , and the wet sheet was then employed.

4. *The use of Alcoholics.*—In the treatment of these cases alcoholics were given to meet indications relating to the circulation. In some of the cases no alcoholics were given. The quantity given was regulated by the frequency and fullness of the pulse, and diminished intensity of the first sound of the heart as heard over the apex. Whisky was the form generally used.

5. *The Dietetic Treatment.*—The chief article of diet during the course of the disease was milk. From one quart to two quarts were given daily, lime water being added.

6. *The Medicinal Treatment, exclusive of Quinia.*—In some of the cases no drugs whatever were given. Those which were given, exclusive of quinia, had reference to the palliation of certain symptoms. Digitalis was given in some instances for its tonic effect upon the heart, and ammonia as a cardiac stimulant. Opium in small doses was sometimes given for diarrhœa. The medication was chiefly limited to these remedies :

From the study of these cases it may be concluded :

1. That by the employment of cold water externally in cases of typhoid fever, the temperature of the body may, after a variable time of the continuance of the employment, be reduced to 102° or lower.

2. After a period varying very much in different cases, and, also, at different times in the same case, the temperature, as a rule, again rises as high as, or higher than, before the reduction.

3. Repeating the employment of cold as often as the axillary temperature exceeds 103° , the number of repetitions required in different cases is extremely variable.

4. The sponge bath and the wet sheet with sprinkling may be employed to the exclusion of the bath-tub in the antipyretic treatment in cases of typhoid fever as well as of other febrile diseases.

5. These modes of employing cold water may be continued

sufficiently long for the reduction of temperature to 102° or lower, and repeated as often as may be required, without risk of any immediate injury, and the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased.

6. Reduction of temperature by these modes as often as it rises, in the axilla, above 103° , improves the condition of the patient. The cases now studied do not afford proof either that the fatality of typhoid fever, or that its duration is thereby diminished. The study of these cases, however, renders it possible that this proof would be afforded by a larger collection of cases.

During the period that the cases now studied were treated, seven hospital cases were recorded in which antipyretic treatment was not employed. In most of these cases the temperature did not rise above 103° , and it was for this reason that the treatment was not employed. Of these seven cases three were fatal, but I need not say that it would be unfair to draw any deduction from the contrast as regards the proportionate number of fatal cases. It is well known that, in general, resistance, toleration, and recuperation are not as well exemplified within as outside of hospitals. Moreover, in cases of typhoid fever, patients are not admitted into hospital until some days after the commencement of the disease. The clinical test of therapeutical measures, as far as fatality is concerned, is therefore best afforded by the study of cases in private practice.

7. The results of the analysis of these cases, although not sustaining the statements of Leibermeister and others respecting the controlling influence of the employment of cold externally in cases of typhoid fever, yet not only show this method of antipyretic treatment to be safe, but afford encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life.—*Medical News*.

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A PECULIAR CONDITION OF THE CERVIX UTERI WHICH IS FOUND IN CERTAIN CASES OF DYSTOCIA.* By ALFRED HOSMER, M.D.

That extraordinary form of dystocia to which attention was directed in former communications† still retains much of the character of an interesting novelty; its importance, which is not unlikely to be underrated for the very reason that its occurrence is supposed to be rare, is not as yet generally appreciated. No allusion is made to it in the last edition of Leishman's Midwifery, published scarcely a twelvemonth since, and revised by the hand of the author. Nor is it mentioned in the second English edition of Playfair's Midwifery. Under date of June 18, 1878, Dr. Playfair writes to me as follows: "I have never seen, or at least recognized, a case of the kind; but I can quite understand the occurrence." However, in the second American edition of this writer's works, Dr. Harris has introduced the subject under the head of "tetanoid falciform constriction of the uterus."‡ In many respects this designation is suggestive and significant, yet it lacks precision, intended as it is to provide for a certain mental reservation with which a topic new to text-books is discussed by the editor, who, at the time of writing, has not been convinced that the internal os is the seat of the anomalous constriction. The title under which we first introduced this subject had its origin in some early impressions which were received in connection with the imperfect investigation of a single case. I was not ready to abandon it until the testimony of clinical observation and anatomical study should have proved what relation exists between a preternatural elongation of the cervix and that strange tetanic contraction limited to a narrow segment of circular fibers of the uterine muscle; and to what extent the amount of this elongation would indicate the degree of dystocia to be encountered, and measure the danger to which the patient is to be exposed.

* Read at the meeting of the Obstetrical Society of Boston, February 12, 1881.

For the sake of uniformity the original title is still used, though the condition under consideration would more properly be designed as *tonic spasm of the internal os*.

† *Journal*, vol. xcviil., No. 12, p. 360, and No. 22, p. 683.

‡ Playfair's System of Midwifery, second American Edition, page 350.

In the third American edition of this book Dr. Playfair respectfully admits the existence of this odd deformity of the uterus, and says: "I have no personal experience of this complication, which, fortunately, must be very rare." He does not attempt to treat or discuss a subject a knowledge of which he would be forced to derive mainly from sources which are neither indorsed by personal acquaintance nor certified by high professional reputation. Yet English writers, whose books teach classes of the largest possible size, must soon appreciate a new form and phrase of difficult labor, and make it a visible, if not conspicuous, object in the obstetric field; otherwise their instructions in midwifery will be incomplete, and fail to provide for one of the most serious emergencies of practice.

It is not to be supposed that this Society will demand any additional proof of the possible existence of an *ante-partum* hour-glass contraction of the uterus. But there is a great diversity in cases which, for convenience and simplicity of classification, are designated by the same name, and the symptoms found in a single instance can rarely, if ever, suffice for a complete description of any morbid condition. I have therefore thought proper to place before you all the clinical material not included in my original collection which I have been able to obtain from the periodical literature of medicine. The several cases will be presented, as far as possible, in the chronological order of their occurrence.

In the *Medical and Surgical Reporter* of February 5, 1876, may be found the report of a case of hour-glass contraction. The patient was a married primipara aged thirty-one. Labor began in the afternoon of April 17, 1874,* upon what was, by calculation, the one hundred and sixtieth day of pregnancy. At the end of sixty hours a dead child was delivered, and without assistance, so far as the record enables us to judge. The womb not diminishing in size, its cavity was explored for the purpose of ascertaining if it contained another child. "The placenta was found attached at the fundus † of the uterus, and it was still quite impossible to make out the kind or condition of the body above."

* My first and only observation was made in September, 1876.

† This statement may fairly be questioned. Those portions of the report which refer to the placenta are somewhat confused.

Twenty hours later a consultation was held, and upon removing a placenta there was found an hour-glass contraction, the degree of which was such that there was left an opening of only one inch in diameter, through which a second foetus could be felt. It was a slow process by which the operator reached and brought down a foot. Progress was slow, and only made by dint of persistent traction, and continued so until the constriction came to encircle the foetal neck. At this point all movement "seemed to be entirely arrested, when, as if something was giving way, the child made rapid advances by the woman's natural efforts, and was born headless." There were two separate placentæ, both of which were duly expelled. "No flowing followed; patient slept some from exhaustion, and with but little tympanites." "On the morning of April 22 the head was found, brought nearly down by the organ's own power." The amount of hæmorrhage was not dangerous, yet the woman died on the afternoon of the eighth day, April 24. This case occurred in the practice of Dr. M. D. Goodyear, of Gorton, N. Y. It is to be regretted that his report is not made with more of fullness and detail. Such as it is, I offer it without comment.

In the *Pacific Medical and Surgical Journal*, January, 1879, Dr. W. A. Briggs, of Sacramento, Cal., relates the following facts: "A married woman, aged thirty-one, whose four previous pregnancies had terminated normally, fell in labor, at term, August 3, 1876. A few hours later the right arm of the foetus was found to be protruding through the os. At six A.M. on the 6th Dr. B. was called in consultation. He found the patient in active labor, with no untoward symptoms and with "pelvic dimensions normal." He proceeded to turn, but upon the first search was unable to find the feet, which, together with the head, proved to be beyond easy reach, inclosed as they were in the superior uterine chamber. During a second attempt the hand came in contact with what was taken to be the fundus of the uterus, and very soon the cessation of a pain allowed the finger to pass beside the foetal neck "through an opening in the presumed uterine roof," and for an instant the alarming impression was conveyed that the peritoneal cavity had been entered. It is soon discovered that the edge of the supposed aperture is per-

fectly smooth, and to the touch suggests "that a silken cord has been run beneath the mucous membrane of the womb, and tightened about the child." During a pain "the 'cord' becomes more rigid, grasps the neck of the child with my finger and almost cuts them. Such are its wonderful power and tenuity." At the instant of uterine contraction the constriction embraced the foetus with such firmness that there seemed to be not simply contact but continuity of tissues belonging to different individuals, so that all trace of an opening disappeared. The patient was now etherized. At first the constriction was found to be as firm as ever, and the child was "held as by a vice." Force was required, yet by digital and manual dilatation the stricture was gradually overcome, and at the end of thirty minutes the hand was fairly within "the upper cavity." The passage of the foetal head having been provided for by securing a still farther relaxation of the annular contraction, the feet were seized and brought down, and delivery was accomplished without difficulty. The child was dead. The placenta followed naturally. The patient made a slow but complete recovery. To the report of this case the writer appends some thoughtful remarks, interesting to read, but not sufficiently brief for introduction here. He insists upon that difference of anatomical structure which makes the contrast between the uterine body and the cervix, and clearly points out the relations in which these two portions of the organ respectively stand to the parturient function. He states at length, and illustrates by diagram, his theory of the manner in which the innate forces of the womb lose their natural equilibrium, and thus produce deformity and dystocia.

In the *North Carolina Medical Journal*, March, 1878, A. H. Goelet, M.D., of New York, furnishes a very meagre and unsatisfactory account of a case of ante-partum hour-glass contraction, which came to his notice July 24, 1877. The patient was a married woman, and this, her third labor, was premature, occurring in the middle of the seventh month. In due time "the uterus was discovered to be contracted in the center, the foetus above the constriction and a finger projecting through." On account of a hæmorrhage, which in amount was sufficient to compromise the safety of the woman, it was decided to deliver at

once. "With great difficulty one finger was forced through the constriction, then another, and after considerable search a foot was found." The constriction opposed the passage successively of the breech, the shoulders, and the head, so that at each of these points there came a requisition for "all the force that could be exerted with both hands." The removal of the placenta was effected with considerable difficulty. Beyond this point the record does not go. But if the foregoing report is based upon observation that is accurate and authentic, the case is one of unusual interest and significance. For it would prove that the development of an ante-partum hour-glass contraction does not necessarily depend upon those influences which may be traced to the relations existing between either the maternal pelvis or the uterine cervix and some portion of the foetus.

Among the papers announced to be read before the Gynæcological section of the American Medical Association, at the meeting held in Buffalo, in June, 1878, was one entitled "Hour-glass Contraction of the Uterus prior to the Expulsion of the Child, by T. A. Reamy, M.D., of Cincinnati, Ohio." What I take to be this paper is reprinted under date of May 10, 1879, in the *Cincinnati Lancet and Clinic*. It contains the report of three cases, one of them being referred to in the *London Medical Gazette*, July, 1848, from *Schmidt's Jahrbücher*, vol. lxiv., p. 37, 1849. A foot-note alludes to a fourth case, "recently reported in the *American Journal of Medical Sciences*." The paper contains some facts that are extremely interesting. It proves that the patient in whom this formidable complication occurs for the first time is not necessarily a primipara, but that it may present itself in a woman who has passed through as many as seven normal labors. It also shows how the abdominal walls may be moulded to the shape of the deformed uterus, and how readily external palpation may often recognize the constriction. As the result of careful clinical observation, it certifies to the marked differences in the physiological condition and action of the two portions of the uterus which are respectively above and below the stricture. The supposed obliquity of the constriction in one instance, raises the question of the possibility of an unequal elongation of the opposite sides of the cervical cylinder. Case II. of this series forms a very

valuable acquisition to the history of this subject, illustrating, as it does, the relation which may exist between tonic spasm of the internal os and the several stages of a multiple birth. According to the record, as the result of an eighth pregnancy, two living male children were born by a brief and easy process. They weighed, the first five and one half, the second five pounds. The uterus was found to contain a third child, and through the abdomen it was "easy to trace the rigid hour-glass contraction." "By persistent traction the hips passed through the constriction, and a dead female child of four and three quarter pounds was delivered." "Just below the umbilicus, at a point seized by the constriction, the body of the child was nearly cut in two." The placenta, with three cords adhering above the constriction, was reached and removed with the greatest difficulty, and only by the successive efforts of three physicians, each of whom experienced in a painful degree the paralyzing and disabling effect of the severe pressure to which the hand was subjected in its vigorous and forcible efforts to overcome the occlusion, and obtain possession of the true uterine cavity. The woman speedily died.

The *Boston Medical and Surgical Journal*, in its issue of May 27, 1880, published the proceedings of the Society, at the regular meeting held in October, 1879. Therein is included the report of a case made by Dr. L. R. Stone, in which a firm constriction, encircling the foetal neck, seriously retarded the progress of labor, rendered instrumental interference necessary, and in some way determined a still birth. The mother recovered. It is worthy of note that a degree of relaxation in the stricture seemed to be produced by the use of ether.

On page 397 of the *British Obstetrical Journal*, September, 1879, may be found "Note of a case of spasmodic contraction of the lower uterine segment during the first stage of labor." It was under this title that Dr. Angus MacDonald made a communication to the Obstetrical Society of Edinburgh, at a meeting held February 12, 1879.* Mrs. C., a chronic epileptic, then advanced ten or twelve hours in her fifth labor, was visited in consultation by Dr. MacDonald at 9.30 p.m., December 16, 1875. Pains

* The Obstetrical Society of Boston had discussed this subject as early as February 9, 1878.

were severe. "Immediately above the cervical segment, which was half dilated and easily dilatable, the lower uterine segment was felt to project or bulge in a peculiarly rigid or shelving manner," and to be as "hard as a deal board." Such was the rigidity of the parts that the presentation could not be ascertained. "The perinæal and levator ani muscles, as well as the lower uterine segment, were observed to be thrown into a condition of intense spasms by every attempt to perform a vaginal examination." The full impression of chloroform removed the spasm at once, and through the unbroken membranes a small head was found to be presenting at the time. During each pain the external os and cervical canal remained flaccid, but the inner os was closely shut, and the head, instead of being depressed by uterine action, was elevated very distinctly. In due time the need of artificial aid was obvious, and with the assistance of chloroform anæsthesia, version was performed with ease, and the child was saved. "The placenta was expelled spontaneously about fifteen minutes after the birth of the child." The record contains no intimation that the maternal convalescence was not a rapid and prosperous one. The reporter alludes to a possible complication of version, which is sometimes fatal to the child, and which consists "of the trouble that is occasionally experienced in getting the after-coming head through the spasmodically contracted lower uterine segment."

The species of case which gives title to his communication, is in his experience unique. The conclusion must then be that it is only in an extremely mild and manageable form that he has witnessed ante-partum hour-glass contraction.

With one exception, the ideas which found expression in the discussion that followed were based upon the theory which located the spasm in the internal os and adjacent muscular tissue of the uterine body, and acquitted the cervix of all participation in the abnormal and perverted condition. The "why" of this thing did not escape attention, and the question receives a provisional answer, as follows: "It would, therefore, appear to me that the predisposing cause in this case was a neurosis affecting the vagina and the lower part of the uterine body, but not extending to the upper ranges of the body, or to the fundus uteri, and which seemed to act in such a manner, on slight stimulus, as to throw

the parts within its reach into a condition of spasmodic contraction. The pressure of the head against the internal os during a pain would appear of itself to have been sufficient to start this spasmodic condition, or, in other words, to have probably acted as the proximate cause of the spasmodic condition." Science may gain something if future observers will bear in mind the hint here given as to the relation existing between individual temperament and tonic contraction of the internal os. In my first paper I distinctly stated the possible aggravation of such contraction through the reflex action of measures that were intended to be remedial.

In view of the terms of the title under which I now for the third time ask the attention of the society to a dangerous and anomalous condition, which in November, 1876, was introduced under the name of ante-partum hour-glass contraction, I desire to quote Dr. J. Matthews Duncan. His article On Two Contrasted Forms of Weak Labor, copied from the *Obstetrical Journal*, February, 1878, page 705, may be found in Braithwaite's *Retrospect*, Part 67, July, 1878, page 184. In one case labor is weak because the uterus of the elderly multipara is feeble and inert, endowed with only a small remainder of its original energy, and incapable of vigorous and efficient action. In the other case, the subject is generally a primipara, or a young woman having a special nervous mobility. The labor is practically weak, not through any deficiency in the inherent muscular power of the womb, but for the reason that the contractile force of the organ, instead of undergoing the normal conversion into the propulsion and expulsion of the child, is expended in the production of deformity. In other words, the body of the womb acquires a permanent retraction; with each succeeding pain becomes a little shorter in its longitudinal dimension, always adding something to the thickness and strength of its wall; while the cervix is elongated and attenuated in a corresponding degree; the foetus becomes stationary, and the condition of labor loses its parturient character. The disproportion between the two portions of the womb may be so great that the lower margin of the uterine body is sometimes raised almost to the level of the umbilicus. In both these forms of weak labor, "the child is brought into the world

by a very small expenditure of force." Dr. Duncan cites the case of an "excessively nervous" woman whose three labors were all, in a similar way, busy and painful, but tedious. "When the head reached the perinæum, while the pains continued severe, progress was arrested." It was only at the third confinement that the nature of the case was exactly ascertained. At that time "delivery by forceps was effected without any effort worthy of the name of pulling, the child was little more than lifted out of the passages."

Without forgetting the allowance that is due to irregularity in pelvic size or shape, let us make a comparison, placing upon one side that case in which the uterus, by the retraction of its body and the elongation of its neck, loses the relation and proportion that naturally exist between the two portions which in their combination constitute the organ; and in which, although spontaneous delivery is extremely improbable, the removal of the child is effected by artificial means with surprising facility and with absolute safety. Upon the other side, we will place the case in which uterine deformity of the most aggravated kind is produced by the introduction of a third element; by the addition of a tetanic spasm of the whole circle of the internal os to the retracted body and elongated cervix, and in which not only is spontaneous delivery simply impossible, but the termination of labor is reached with a difficulty that is beyond all description, and can be appreciated by those alone who have met and overcome it, and have been eye-witnesses of the appalling danger to which it exposes both the lives that are involved in every case of child-birth, and which natural labor was never intended to put in jeopardy.

Trite and old is the saying that new things are not to be found on this side of the sun. Possibly the older obstetricians failed to appreciate all that passed before their eyes or came in contact with their hands, just as the old physicians accepted identity when there existed a similarity only the most remote, and in diagnosis overlooked distinctions which now irresistibly force themselves upon the attention. But within seven years, that is, since April, 1874, by a coincidence that is not without precedent in the history of even important discoveries, ante-partum hour-glass contraction has been observed in so large a number of cases

as to modify the impression of extreme rarity and extraordinary character which was conveyed by the first report of a case made to this society. The wide geographical distribution of the instances here collected proves that this particular complication of labor does not take its origin in accident or influence of place, but that it forms a legitimate and indisputable part of universal midwifery, and is entitled to a high rank among those difficulties and obstacles to delivery which make the process of child-bearing in any degree unnatural. Different observers, in entire ignorance and independence of each other, have made their several descriptions in words and phrases so nearly identical that there can be no doubt that they have all been dealing with the same thing.

I will not attempt a careful analysis of the several cases which constitute the substance of this communication, but upon making a general review of them, I would draw the following conclusions, and ask their provisional acceptance :

1. Simple elongation of the cervix, even though it be excessive, disables the uterus by perversion of its force, renders spontaneous expulsion improbable, but in connection with artificial delivery does not produce a condition of things to which the term dystocia can be applied with any propriety or significance.

2. Tonic spasm of the internal os may in single labor be developed so early as to imprison the whole foetus in the cavity of the uterine body, and in a multiple labor its production may be so postponed as to interfere only with the birth of the last child. Its existence cannot necessarily be referred either to pelvic deformity, to extreme elongation of the cervix, nor to the occupation of the cervical cavity by any portion of the unborn child.

Finally, I would call attention to the facts that tonic spasm of the internal os has shown a marked tendency to recur in the successive labors of those who have once or even twice survived the danger to which it exposed them, and that the patient in whom it occurs for the first time is not necessarily a primipara.

The form of difficult labor to which this article refers has sometimes been spoken of as "Bandl's dystocia." That obstetrician published in 1875 *Rupture of the Uterus*, and in 1876 *Relation of the Uterus and Cervix in Pregnancy and during Labor*. But I am not aware that in either publication he describes tonic spasm

of the internal os. A competent medical friend, recently a student in Vienna, and thoroughly familiar with the German language, having searched at my request, writes under date of February 24, 1881: "I have looked carefully through the two pamphlets, and find no mention at all of a spasmodic contraction of the internal os."—*Boston Med. and Surg. Journal*.

ON THE TREATMENT OF THE VARIOUS FORMS OF CONSUMPTION.

BY ROBERTS BARTHOLOW, M.D., LL.D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College. Philadelphia. (Concluded from page 669, December, 1881.)

I will now pass to the consideration of particular forms of phthisis.

You have seen recently several cases of caseous phthisis, in which there were considerable areas of infiltration; the period of inflammation had passed, and the products accumulated in the alveoli of the lungs were undergoing caseation. Now the problem for solution in these cases is, how shall we obtain the softening and extrusion of the caseous material without destruction of the pulmonary tissues? Although it is generally held that we possess no direct means of acting on these caseous deposits, and that they can be removed only by the improvement which we may effect in the bodily condition, I have reason to believe that we can reach and act on them to a considerable extent. The salts of ammonia have the power to increase the alkalinity of the blood, to prevent coagulation of fibrin, and to dissolve the albuminous exudations. Whilst the remedies were administered I have repeatedly observed the absorption and disappearance of caseous deposits. It is obvious the smaller in extent and the more recent, the more amenable to the action of the remedy. Probably the best mode of administration of the ammonia is to dissolve the carbonate in solution of the acetate (gr. v-x- $\bar{5}$ ss), or when it is desirable to give the iodide with the carbonate, they may be administered in an emulsion together. The duration of the administration will be governed by the effect on the caseous

deposits and by the forbearance of the digestive organs, but the remedies must be used for many months in most cases. By giving them properly diluted before meals, and allowing the stomach periods of rest, they may be continued for lengthened periods without ill results.

The range of temperature, and the amount and kind of interference required, are very important subjects. With regard to the character of the fever it must suffice for me to insist upon the fact, which I have often stated, that the febrile movement of the stage of exudation and deposit is different in character from that of the period of softening and extrusion. The former is inflammatory; the latter septicæmic. During the inflammatory stage we are concerned to employ means to lessen exudation, and to favor its immediate liquefaction and discharge. These means are quinia, digitalis, aconite, jaborandi, etc. When, however, the alveoli are blocked with the caseous deposits our attention must needs be directed to secure a favorable disposition of this material. When the caseation is completed there is a temporary subsidence of the active symptoms, which may continue for some time; the fever abates notably or disappears; the general state correspondingly improves; the cough is less troublesome; the expectoration slight; and there is, in fact, a delusive appearance of returning health. The scene changes when the process of softening begins, and moist sounds are audible in abundance where bronchial voice and breath were heard a short time before. Now there is an extensive area of pus formation, and the fever which attends it is a septicæmic fever. Observe the attendant phenomena; there is a daily sensation of coldness, of chilliness, or a distinct chill, some time during the morning, and for a short time before it the temperature had been at normal or even below; then a fever comes on, the mercury rising to 103°, 104°F.; and the whole process terminating in a profuse sweat. In respect to this fever the practical point I wish to impress on you is, that the best means of keeping down the temperature are rest, and the administration of remedies to restrain the sweats, and to quiet the cough. By rest I mean a condition of repose without exercise, except such muscular movements as are required in dressing, in walking from one room to another on the same floor, etc. There

are sound physiological reasons for this recommendation. Rest lessens the consumption of material, the wear of tissue, and the production of heat, and conversely exercise increases the consumption of material, wastes the tissues, and increases the production of heat. Applying the physiological data to the subject before us, I must admit that exercise is theoretically prejudicial to the phthisical suffering from septicæmic fever. I have made a number of careful observations with a standard thermometer to ascertain the effect of exercise on the daily temperature of consumptives in the stage of softening, and I have noticed a rise of from one to two degrees. Any observant physician, whose attention is directed to it, will not fail to perceive the disastrous effect of persistent exercise in respect to an exacerbation of all the symptoms. Whilst I thus strongly insist on the necessity for rest when there is any considerable elevation of temperature in phthisis, I do not mean to apply this dictum to all cases. In the cases of incipient phthisis, fibroid lung, and chronic forms, with little fever, I advise an outdoor life, and exercise consistent with the stamina of the individual. Experience has abundantly shown that in cases of consumption at the initial stage, an outdoor life of some considerable exposure, indeed, is permanently beneficial. Furthermore, gentlemen, I must relieve your minds of the impression, if you have received it, that I mean by *rest*, confinement to the foul air or other evil hygienic influences of the sick room. By no means. Rest is not incompatible with constant, or nearly constant, exposure to the external air, and this I always insist upon in prescribing the necessary regimen.

I come now to another symptom—cough—which usually taxes severely the resources of the physician. As cough prevents sleep, destroys rest, and is exhausting, the patients are clamorous for relief. Much coughing is a peculiarly severe form of exercise, and demands suppression or amelioration for this reason. The expedients are almost past computation—a sure indication both of failure and intractability. The reflex irritation proceeding from the fauces may be allayed by a gargle of bromide of potassium, by brushing over the mucous membrane a one per cent. solution of carbolic acid, or by atomizing a solution of morphia. The combination of diluted hydro-bromic acid, and spirit of chlo-

reform proposed by Dr. Fothergill, does very well sometimes, but in general is disappointing. In fact there are no efficient substitutes for opium, and we must turn to this when the cough is severe and persistent. The most generally useful of the preparations and derivatives of opium is codeia. The grounds of its utility in cough, are these: it has a selective action on the pneumogastric nerve, allaying irritability of its end organs; it is calmative and hypnotic, and as compared to morphia is less excitant and less nauseant. Codeia is adapted to those cases in which the cough is largely nervous. It may be combined with strychnia when there is vomiting, and with atropia or picro-toxine when the sweats are profuse. The following are examples: *Rx.* Codeiæ sulph. gr. x. ext. hyoscyami \mathfrak{D} j. M. ft. pil. no. xx. Sig. One pill every four hours. *Rx.* Codeiæ sulph. gr. xvj. strychniæ sulph. gr. j, atropiæ sulph. gr. $\frac{1}{2}$, acid, sulph. dil. \mathfrak{Z} ij, aquæ \mathfrak{Z} vj. M. Sig. Ten to fifteen drops three times a day. Morphia may be substituted for codeia in any of these prescriptions, by reducing the quantity one-half. Carbolic acid exercises no little influence over cough, expectoration, and fever, and is most serviceable in allaying the reflex vomiting. It is best given in solution, as follows: *Rx.* Acid. carbolic, gr. viij, aquæ laurocerasi, aquæ $\mathfrak{A}\mathfrak{A}$ \mathfrak{Z} i. M. Sig. A teaspoonful every four hours. Carbolic acid is especially indicated in the fetid expectoration of bronchiectasis. In the cough of fibroid lung, and of the stage of deposit before softening in caseous pneumonia, I have had excellent results from the administration of iodide of ammonium in the wine of tar. *Rx.* Ammonii iodid. \mathfrak{Z} ij, vini picis liquid; syr. tolu $\mathfrak{A}\mathfrak{A}$ \mathfrak{Z} ij. M. Sig. A teaspoonful.

Now, gentlemen, I come to the last topic which I can discuss to-day—night sweats. This is both an interesting and an important subject. It is interesting because of the striking results obtained by some new contributions to our therapeutical resources, and important because of the baleful influence of the sweats over the progress of the disease. If the sweats are profuse, there is an actual loss of material, of salts and organic matter, which represents waste of tissue. It is highly important to check this waste and preserve the material for the nutrition of the body. Until the recent observations of Dr. Murrell proving the great

value of picrotoxine, atropia had the first place as a remedy for the night sweats of phthisis. I have usually given atropia with strychnia and morphia for the triple object of arresting the sweating, allaying cough, and stopping the reflex vomiting. It is not a little remarkable that the temperature is generally reduced by the combined use of these remedies. I have preferred to give the atropia with regularity three times a day, because of an influence over the progress of the disease, which seems to be independent of its anhydrotic power, and which can be explained only on the supposition that it has the power to improve the nutrition of the lungs. Its introduction into use as a remedy for phthisis has put a new phase on the prognosis of cases of caseous pneumonia, not advanced to the stage of softening. Some practitioners prefer to give atropia in a single full dose (1.60th of a grain) at bed hour, but the results are better, if given in a small quantity (1.200th of a grain) the effect being distributed through the day. The susceptibility to the action of atropia varies greatly, and as immense discomfort may be produced by a medicinal dose, care is necessary to avoid unpleasant results. Recognizing the importance of the influence which atropia appears to have on the trophic system of the lungs, I have had patients take it for years at a time, and without any ill effects.

The success of picrotoxine as an anhydrotic has been quite decided. Dr. Murrell finds that so small a quantity as the 1.200th of a grain, given at bed hour, may arrest the sweating for a number of days. Although possessed of properties somewhat like those of strychnia, it is by no means so powerful, and may be given by the stomach up to 1.30th of a grain. Dover's powder, and, oddly enough, pilocarpine occasionally, acts very decidedly as an arrester of perspiration—a capital illustration of certain kinds of physiological antagonism. But pilocarpine cannot be depended on for constant service. Take it all in all, atropia should be preferred in most cases, because of its apparent influence over the nutrition of the lungs. Whilst atropia is given, three times a day, picrotoxine may be exhibited at bed-time, if the effect of the former is inadequate.

There are other important topics connected with the treatment of phthisis which I would gladly enter on, if there were sufficient

time, but in the facts I have laid before you will be found the main points from which the details may be easily derived. You will find, indeed, that treated according to the principles I have just developed, many cases of phthisis will be conducted ultimately to a safe termination, and you will learn to look with more hopeful confidence on the success of your management than you have probably done heretofore.—*Medical News and Abstract.*

IN response to the challenge for the production from the experience of our American surgeons results which demonstrate any superiority in the methods of Mr. Lister over those less complicated and more frequently adopted, and to meet also the demand that we should compare the results of the different methods adopted by surgeons of to-day, I want to call attention to the labors of my friend, Professor Gerrish, of the Maine General Hospital, who last spring published the results of such a comparison made in the wards of that hospital. He was an enthusiastic adherent of antiseptic surgery according to Lister; among his colleagues was Dr. Wm. Warren Green, referred to in one of the papers of the evening. Professor Green was not an adherent of Lister. Professor Gerrish treated six (6) cases of excision of the breast according to Listerian methods. His colleagues excised the breast in seven (7) cases. They were all in the same ward, and cared for by the same nurses, fed with the same food, and their conditions were as near as possible the same. It is not to be forgotten that their constitutional differences are to be looked after, and it was stated that the constitutional conditions of those treated by ordinary methods was quite as good, if not better, than those treated antiseptically. The results were as follows: The average number of days in hospital of patients treated antiseptically, was $12\frac{3}{4}$. When they left the hospital, every one left with the wound entirely closed, except in one case. Of those who were treated according to the ordinary methods, the average stay in hospital was $23\frac{1}{4}$ days, and in only three cases had complete healing of the wound taken place at the time of the discharge. Of the cases treated antiseptically, in every one was union by first intention obtained without suppuration, except in one case, in which atmospheric air was accidentally allowed access to the wound. Of the non-antiseptic cases, in all there was suppuration. Here, then, has been performed a practical experiment, by one of our own colleagues, in conditions that were especially favorable for rendering the results decisive, a real *experimentum crucis*. The results need no comment.—*Pilcher.*

Items.

GENERAL RULES FOR THE PREVENTION AND RESTRICTION OF CONTAGIOUS DISEASES. Issued by the Michigan State Board of Health.

1. Avoid the contagium or special cause of the disease. Do not take the breath of one sick. Unless you are needed to care for the sick, or are protected by having had the disease, or, in case of small-pox, by thorough vaccination, do not go near the sick person. Do not allow your lips to touch any food, cup, spoon, or anything else that the sick person has touched or that has been in the sick room. Do not wipe your face or hands with any cloth that has been near the sick person. Do not wear any clothing the sick person has worn during, just before, or just after his sickness. Keep your hands free from discharges from the body or skin of the sick person. Do not touch him with sore or scratched hands. Particularly avoid inhaling or in any way receiving into the mouth or nose the branny scales that fall off or peel off from one recovering from, or apparently wholly recovered from scarlet fever.

2. Restrict the contagium or special cause of the disease. Isolate the sick. Separate those sick with any of these diseases, even if they are but mildly sick, from all persons except necessary attendants. A person sick with any of these diseases should not be permitted to suffer from want of care, food, or comfort; but all his wants should be attended to by adults, or by those who are protected by proper vaccination or by having had the disease. Children, and those who are not thus protected, should be kept away from these diseases. Do not go from the sick-room to a child or other unprotected person until after change of clothing,

and thorough washing of hands, face, hair and beard. Always wash the hands thoroughly after any necessary handling of the sick person, or of anything that has been in contact with the sick. Keep those who have been exposed to any of these diseases away from schools, churches and other assemblies, and from all children, until it is known whether they are infected—and if they are found to be infected, isolate them till after complete recovery and thorough disinfection.

3. Destroy the contagium or special cause of the disease,—

a. By thoroughly disinfecting or destroying whatever is removed from the person sick or from the sick-room. All discharges from the patient should be received into vessels containing a strong solution of sulphate of iron (copperas), and then, in cities, thrown into the water-closet; elsewhere they should be buried at least one hundred feet distant from any well; or where this is impracticable they should be received on old clothes, which should immediately be burned or disinfected and buried.

b. By thoroughly disinfecting the sick-room and its contents, after removal of the sick person, whether by death or recovery.

Disinfect as follows: Burn whatever has been in contact with the sick person and is not too valuable to burn. Garments, sheets, blankets, etc., that will not be injured by bleaching, should be boiled for half an hour in a zinc-solution made by dissolving zinc sulphate and common salt in water, in the proportion of four ounces of the zinc sulphate and two ounces of common salt to one gallon of water. Hang up and loosely spread out clothing, bedding, etc., that cannot be boiled in the zinc-solution, or spread it loosely over chairs in the sick-room, leaving the bedstead and other furniture in the room. Close all openings to the room very tight. For a room ten feet square place two pounds of sulphur in an iron pot or pan supported on bricks. Set the sulphur on fire with live coals or with a spoonful of alcohol lighted by a match. Be careful not to breathe the sulphurous fumes. Leave the room tightly closed for several hours, then air it thoroughly. For a large room use a proportionately larger quantity of sulphur at the rate of two pounds for each 1,000 cubic feet of air-space, and try to burn as much as possible of the sulphur used.

4. Keep your house and premises and everything connected, therewith clean, but remember that *the contagium of these diseases may attach to the cleanest article* of clothing, food, drink, book, or paper, if it is exposed thereto.

TREATMENT OF FELONS. — Adinell Hewson offers some suggestions for the accurate diagnosis and successful treatment of felons. For diagnosis he makes a flattened conical tube of binder's board with its base five by three and one half inches in diameter, so trimmed as to fit closely over brow, cheeks and upper lip. The length is such as to bring the apex at about the distance of the range of distinct vision. The apex is an orifice one-eighth by three-sixteenths of an inch in diameter. The tube is made from a sheet of binder's board by dipping in warm water to soften it, then rolling it diagonally, and wrapping with cord to retain form until dry.

By means of this simple apparatus he examines the tissues by transmitted light. In the case of a suspected felon the patient's finger is brought to the point of the tube, which is held in the direction of a bright light, either natural or artificial, while the face is so applied at the base as to make it fit closely and exclude the light. During the examination Dr. Hewson finds it of advantage to have the patient practice forced, rapid respiration to produce an anæsthetic effect. If the apex of the tube covers healthy tissues of the finger, the characteristic bright pinkish-red color is readily perceived, while if the tissues are engorged the darker red tint, deepened in proportion to the intensity of the engorgement, will be equally characteristic, and will form a marked contrast to the color to be seen on examining the corresponding finger on the other hand. If the tint, though still reddish, be of a yellow hue pus has formed in the cellular tissue around or in the theca of the tendon. If by making firmer pressure, so as to cut off the lateral illumination through the tissues, the tint is found to be of a positive yellow, it is evident that there is suppuration in the theca of the tendon. Finally, if the tint so transmitted is of a dirty or opaque yellow the bone or periosteum is the seat of purulent formation and collection.

When such examination demonstrates that pus has not yet

formed, he has generally succeeding in aborting a felon by the application of a thick paste of wet clay, covered first with tissue paper and then with a thin layer of bandage stiffened by liquid glue painted in strips lengthwise on each side of the finger. The object of applying the glue thus, instead of covering the whole surface, is to allow the drying of the clay, which would be prevented by coating the whole surface with glue.

Dr. Hewson's experience with such uses of clay has been very extensive, and he reports some very interesting and valuable results obtained by this agent. In this class of cases here considered he finds that as a rule the relief is very prompt, in which case the dressing is allowed to remain for several days. When the pain is not relieved in two or three hours after the application of the earth he removes it at once and makes a free incision, as he feels sure that nothing else will arrest the process.—*Coll. and Clin. Record.*

A BLIND HORSE FOR A SURGEON.—Dr. Geo. I. Rice, of La Moille, Illinois, relates a very interesting case. A patient presented himself with an old dislocation of the shoulder downward, which had occurred nearly a year before. No force, which it was prudent to use, was sufficient to reduce it, and the case was left to nature.

Last Thanksgiving day, just four years after the joint was dislocated, the patient was riding in a buggy, leading a blind horse following. To make sure of his hold, he wound the halter around his wrist. The blind horse chancing to run against the hind wheel, became frightened and jerked violently backward. The forward horse meanwhile kept pulling ahead. The wrench was terrible, and the man went home nearly sick and took to bed. At length he fell asleep, and woke after some hours refreshed. To his great surprise, he found the dislocated shoulder reduced, and in a short time the joint regained nearly its normal usefulness.

It is believed that the Board of Health will have this horse fined for practicing without a license.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Jan. 2 and 16.

West Chicago Medical Society—Mondays, Jan. 9 and 23.

Biological Society—Wednesday, Jan. 4.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—2 p. m., Medical, Profs. Hollister and Quine.

Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Rush Medical College—3 p. m., Dermatological and Venereal, by Prof. Hyde.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—2 p. m., Medical, by Dr. Bridge; 3 p. m., Ophthalmological and Otological, by Prof. Holmes; 3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, Prof. Jenks.

Rush Medical College—2 p. m., Diseases of Children, by Dr. Knox; 3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn; 3 p. m., Orthopædic, by Prof. Owens.

Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.

Chicago Medical College—3 p. m., Neurological, Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.